SORE THROAT
AND THE
LARYNGOSCOPE

DR PROSSER JAMES.

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SORE THROAT,

ITS

NATURE, VARIETIES, AND TREATMENT;

INCLUDING

THE USE OF THE

LARYNGOSCOPE

AS AN AID TO DIAGNOSIS.

BY

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PREFACE.

No apology need be offered for calling attention to a complaint so prevalent, and at the same time so important, as SORE THROAT.

The author did not set himself to compile a systematic account of the diseases of the Throat, but so to group and compare several disorders as to exhibit their mutual relationships, facilitate accurate diagnosis, promote right principles of pathology and treatment, give expression to some new ideas, evoke just criticism, and stimulate to fresh exertion in this fertile field.

In the first chapter will be found a preliminary sketch of the whole subject, somewhat after the

fashion of French memoirs; in subsequent ones, a more minute examination of the several affections.

A few cases are added, by way of appendix, in the selection of which preference has been given to those which illustrate more than one of the points previously discussed. They are intended to corroborate the opinions enunciated rather than to serve as specimens of diseases.

Should these pages contribute to the welfare of suffering humanity, the writer will have his reward. For the suggestions they contain he only asks the candid consideration he is wont to accord to those of his fellow-labourers.

27½, Finsbury Square, E.C., and
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SORE THROAT.

CHAPTER I.

GENERAL SKETCH OF THE SUBJECT.

If the reader, whose anatomy has grown rusty, will be good enough to inspect some friend's throat, or his own by the aid of a mirror, he will have recalled to his mind a more vivid notion of the relations of the several parts than the most careful description could convey. Nothing more is necessary at this stage than to remind him, that the mucous membrane which covers these parts is continuous, is, in fact, a portion of the great gastro-pulmonary tract, which, commencing at the lips, eyelids, and nostrils, passes back through the mouth, throat, alimentary canal, and air-passages, thus lining the inside of the body just as the skin does the outside, the former being always moist, the latter comparatively dry. The continuity of these structures ought never to be lost sight of. Their analogy is closer still; in structure and function they are very similar, and indeed they appear to run into each other. Look at the lips, and you cannot tell where the external skin ends and the internal one begins. There is no distinct line of

demarcation between the skin and mucous membrane; they glide insensibly into each other; in a word, they are continuous. In certain circumstances, when the conditions of the one get imposed upon the other, they become readily transformed into each other, and so go far to show that in essence they are but one, their difference depending on the conditions to which they are subjected. This is a beautiful instance of Nature's simplicity, and we may well admire her handiwork when we contemplate this exquisitely fitting garment, woven without seam, adapted by a hundred variations to every office it has to fulfil, covering the body outside (skin), and lining it inside (mucous membrane), winding through every turn of the wondrous labyrinth, and enclosing in its folds the strange machinery of life.

Reduced to its simplest form, mucous membrane may be described as consisting of a very fine lamina, mounted on a network of blood-vessels, and covered by epithelium. In the same rough manner it may be stated that the blood is brought to the part by the vessels, that some of its constituents ooze through, and, together with cast-off epithelium-scales, form the secretion. We must, however, be a little more definite. Beginning with the deepest layer—the vascular base—we find it supported and united by cellular tissue. It is of various degrees of thickness, and arranged, sometimes in prominences, called papillæ or ovilli; at others in depressions, called crypts, follicles, or lacunæ; and, again, in involutions, called glands. Upon this is placed the primary or basement membrane (membrana propria) which is so delicate that it defies all our attempts to make out its structure; we are therefore con-

strained to content ourselves by calling it a simple, transparent, homogeneous layer. The epithelium covers this, and is of three kinds—tesselated or pavement, cylindrical or conical, and ciliated. Epithelium gives the smooth surface to mucous membrane, and to its cells belongs the more intricate part of the act of secretion.[1] These cells, as they grow, appropriate to themselves their own proper nutriment. Having attained perfection, they subsist for a short time, and then bursting or dissolving, give themselves and their contents to form the secretion. Each individual cell thus goes through the stages of life—arrives at maturity and passes away—an exact picture of the economy of which it forms so small a portion.

Looking at mucous membrane as a secreting apparatus,—had it simply covered the internal surface it would not have sufficed for the purposes of animal life, and consequently some contrivance was needed to augment its extent. That end is attained by making the surface irregular—sometimes this is done by protrusions, but much more frequently by recesses, as already mentioned. A simple *cul de sac* of mucous membrane forms a crypt, follicle, lacuna, or glandule. Such a blind pouch may be lengthened out and coiled up, much more frequently it branches out or subdivides in various ways. Thus glands—so far as we have here to do with them—may be defined as dispositions of mucous membrane for the sake of providing a greater secreting surface. Their shape depends on the areolar tissue which supports the vessels and unites the branches. They are often enclosed in a fibrous envelope, and are always supplied

[1] 'Cyclopædia of Anatomy and Physiology.'
'Principles of Human Physiology,' by W. B. Carpenter, M.D.

with nerves and lymphatics. The same contrivance is adopted in other cases. The intestines are coiled on each other, and the capillaries wind and flex into a most amazing network, just as these elevations, depressions, and involutions, pack into a small compass many thousand inches of the secreting membrane.

The portion of the mucous membrane with which we are now concerned is studded with innumerable depressions, commonly called the follicles of the throat. In them secretion goes on actively; possibly, too, its product may be somewhat different from that of the plain surface. Their structure is finer and more difficult to trace. The tonsils may be ranked between these and more perfect glands. On their surface may be seen upwards of a dozen openings leading into simple blind pouches—lacunæ. Around the walls of these are a number of closed capsules; whether they discharge their contents by bursting is undecided. The salivary glands are perfect secreting organs of their class, elaborating important fluids, and possessing ducts to convey them to their destination.

The act of secretion is modified by many circumstances to which living beings are subjected. From what has preceded, it will be anticipated that an unusual flow of blood to a part will cause an extra amount of secretion, while a diminished supply of the vital fluid will give rise to an opposite effect. Yet the sequence is not so invariable that diminution or excess may always be thus easily accounted for. Other disturbing and counteracting agencies are often at work. The tone of the capillary system seems to have a wonderful effect, for in a relaxed state more fluid escapes than in health, giving rise to hyper-secretion or passive

hæmorrhage. An unusual quantity of the material secreted getting into the blood, has to be eliminated by an increased activity of the organ which usually secretes it. Again, the presiding nerves have considerable influence over the act, as proved by stimulants to them augmenting the flow. Through the nervous system certain mental states find expression by an increased or decreased secretion. The effects of joy, grief, anxiety, or contentment on the skin, kidneys, and bowels, are familiar to all. In many instances emotion increases secretion, but sometimes a contrary effect is produced. The liability of the salivary glands to refuse to work from mental anxiety is probably the foundation of the Indian method of detecting a thief, in which the parties implicated are compelled to chew rice, and spit it out on a leaf. He who has not enough saliva to wet it is judged guilty.

The preceding sketch of the anatomy and physiology of mucous membrane affords an advantageous standpoint for glancing at its pathology; since almost every form of sore throat originates in this structure.

INFLAMMATION OF THE MUCOUS MEMBRANE.

In entering on the diseased state of the lining of the throat, the important part played by inflammation demands that this lesion occupy our attention first. A common cold may serve for an example, and that kind called influenza is still more typical. The first impression frequently falls on the nose and eyes, very often it commences in the throat. Wherever it begins it displays a tendency to spread. The first indications that the membrane is inflamed arise from the preternatural

condition in which it is placed. The afflux of blood is increased, and the nerves are disturbed; tumidity, heat, and dryness, with impairment or loss of function, are thereby occasioned. Hence the prominent symptoms are obstruction of the nose, a feeling of stuffiness, redness, heat, itching, it may be even pain, loss of smell, partial or entire, &c. The redness, heat, and swelling depend on the congestion, just as in inflammation of other structures. The pain is seldom intense, often only itching, as this tissue is not possessed of the same sensibility as others. Moreover, pressure from within is more easily yielded to than in tougher textures. We never observe that pain which characterises parts highly congested and incapable of much distension, but we often meet with very great swelling. Then the itching or pain is often referred, not to the part irritated, but to its extremity, where the membrane joins the skin; thus, itching of the nose is an everyday symptom of worms in the intestinal canal.

This state—the dry stage—soon ends in a moist one, where the prominent phenomenon is increased secretion. The debilitated vessels suffer a great deal of fluid to escape, which departs more or less from the normal character of the secretion. We now have a running from the nose of a thin discharge, often so acrid that it excoriates the lip. After a while this becomes thicker, yellowish, or even greenish, and returns gradually to the healthy state. As a rule, these stages are to be observed in all inflammations of mucous membrane, the variations which occur depending mostly on incidental circumstances, such as specific cause, constitution of the patient, severity or duration of the com-

plaint, and, above all, on the position of the part attacked.

Of such consequence is this last item in reference to the symptoms set up, the danger impending, and the treatment to be employed, that inflammation of mucous membrane receives different names according to the part attacked. In the lining of the nose it is coryza, in the throat cynanche or angina,[1] and further down the air-passages laryngitis, tracheitis, and bronchitis successively. The tendency of this lesion to spread has already been alluded to. In whatever part it commences, it rapidly stretches itself along the mucous membrane, without necessarily involving the tissues beneath. In influenza this is particularly observed Commencing in the nose and eyes, it soon involves the throat, and even runs along the Eustachian tubes, giving rise there to distressing singing or noises in the ears, or deafness. The soft palate and tonsils almost invariably suffer. Then it travels down the larynx, trachea, and bronchi, often to their minutest ramifications. And although its chief force is thus expended on the respiratory tract, the digestive canal does not altogether escape. The pharynx is necessarily involved by its position in a disease so inclined to spread over the adjoining structure. Is it not also possible that the disturbance of the stomach, which is often very great, may arise from the disease having passed down the gullet? Nevertheless, the violence of influenza is for the most part spent on the respiratory tract. When it commences in the throat we may watch its extension in both directions, downwards to the lungs and upwards

[1] The Greek and Latin words, cynanche and angina, are used in the same general sense as the English 'sore throat.'

to the nose. Notwithstanding this tendency to spread, we do see inflammation confined to a small portion of mucous membrane, constituting various diseases, which must be described hereafter. The throat is the highway to both the lungs and the stomach, its lining forms part of both the respiratory and the alimentary tract taken separately, and on this account is a frequent sufferer. It has been seen to be embraced by influenza, which for the most part exhibits a predilection for the respiratory portion, as do many other diseases, and it is equally obnoxious to affections which have a strong inclination to run along the alimentary canal, leaving the respiratory membrane free or nearly so. Of these aphtha is a familiar illustration. Usually commencing in and always attacking the mouth, thrush passes along the throat, the common highway to the lungs and stomach, choosing the œsophageal road, and sometimes travelling the whole length of the tube.

Dissection shows, however, that its appearance at both terminations is not a proof of its extending throughout. The extremities are the most sensitive, they more readily take on diseased action than the intermediate portion, and seem to sympathise with each other. Hence we meet with the disease in both these situations where there is strong evidence that its extent is not so great as a careless observer might conjecture.

It is now time to consider inflammation of the mucous membrane confined to the throat. The patient complains of heat and soreness in the part, difficulty or pain in swallowing, and yet he cannot refrain from the attempt, for the unusual fulness imparts a sensation of something to be got rid of by this process. The redness and swelling are very perceptible on looking into the

fauces. The uvula is enlarged, its increase of size being most manifest by its elongation. When its length is considerable, the desire to swallow is aggravated, and by tickling the epiglottis it gives rise to a very annoying cough. The tonsils are much swollen, and the finger readily detects their hot, hard, congested state. When the moist stage comes on, the secretion, which is not so abundant as in other parts, is hawked up with pain and difficulty, being rather thick and extremely tenacious. Difficult breathing will be present when the swelling impedes the passage of air, or the upper part of the larynx is involved. The above form of disease is often brought on by cold, and is that to which the term inflamed sore throat is most applicable. When it is severe, inflammatory fever is set up, and even in subacute cases there is generally some constitutional disturbance. In connection with the exanthemata, very intense fever is present. When it puts on the worst form, typhoid symptoms supervene, and mortification may ensue, constituting malignant or putrid sore throat. In healthy constitutions it rapidly resolves itself, or at most subsides into the chronic state. This, whether coming on gradually, or being the remnant of an acute attack, presents the same symptoms in a less degree, but more obstinate. Congestion is no longer active; soreness is not intense, often it is not complained of; swallowing may be easy, or only unpleasant; a feeling of dryness or heat is present, and a continual hawking of tenacious phlegm or a tickling cough harasses the patient. The throat is no longer fiery red—often it is pale, but there is evidently a want of tone, the tonsils are perhaps large, the velum low down, the uvula a good deal elongated. The veins are seen of

abnormal size, coursing over the membrane, analogous to the condition called "blood-shot" in the conjunctiva. Such is the state called "relaxed sore throat." The condition of the parts will explain the symptoms; thus, the enlarged tonsils are the cause of the obstruction to the food, the elongated uvula tickling the epiglottis gives rise to the cough, the thick and tenacious secretion to the hawking, the combination of these to the desire to swallow, and so on.

The consequences or terminations of inflammation in the throat do not differ from those of the same lesion elsewhere. Chronic induration or thickening is not uncommon in the velum and uvula. Effusion demands attention, for infiltration of the uvula may cause an annoyance, the only difficulty of curing which consists in discovering it, while œdema of the glottis may rapidly suffocate the patient, or necessitate a serious operation to save life. Abscess is mostly met with in the tonsils, constituting quinsy. Gangrene is to be dreaded in the severer forms, especially in connection with eruptive fevers. Ulceration is a common consequence when the constitution is not good. The term ulcerated sore throat is applied indifferently to all cases in which this process has taken place, although they are very dissimilar. When it occurs rapidly, as the result of acute inflammation, the ulcers soon attain a considerable size, unless checked by efficient treatment. After a chronic inflammatory state the mucous follicles are very apt to slowly ulcerate, and disease is sometimes from the first confined to them, the intervening membrane being healthy. In these cases the minute follicles become large, red points, which, after a time, ulcerate. This is the "follicular disease" of Dr.

Horace Green,[1] of New York, who has bestowed great labour on the subject, and to whose praiseworthy zeal we are indebted for an accurate description of it in the several portions of the membrane. In devoting himself exclusively to the follicular form of ulceration, he seems almost to ignore any other. Without for a moment wishing to disparage his labours, the author thinks it right to state that experience teaches us that the intervening membrane frequently is primarily attacked with ulceration, which involves the follicles secondarily—a lesson in pathology which anatomy and physiology might have taught us *à priori* to expect.

We have seen that inflammation may be confined to a small extent of the surface, or involve the whole. The position and extent of the part are of the first importance, because on these points hang the diagnosis, prognosis, and treatment. From these circumstances, too, our classifications have been made. Local inflammations of mucous membrane, therefore, get names which are used to signify the entire ailment or a set of symptoms; thus, the word coryza signifies an inflamed state of the pituitary membrane, which may be a separate attack or only a part (a symptom, so to speak) of a graver ailment. Cynanche, angina and sore throat are terms applied in the same way. Deafness, again, or singing in the ears, tinnitus, may be equally localized disorders or symptoms of more extensive diseases. The above complaints evidently depend on the attack involving the lining of the nose, throat, or Eustachian tubes. The pharynx discovers its attacks by pain or difficulty in swallowing, without affecting respiration, while the larynx and trachea give instant

[1] 'Diseases of the Air-Passages.'

notice of their sufferings by disturbing that function; yet in these cases it is seldom easy to swallow. If acute inflammation seize the tonsils, deglutition is extremely painful, and sometimes the breathing is considerably affected; yet all symptoms may be sometimes absent[1] when the tonsils are very large and tender, a fact we can scarcely understand.

EXUDATIVE SORE THROAT.

There is a form of inflammation to which the mucous membranes are liable which determines an albuminous exudation on the part, sometimes completely lining it with an adventitious membrane. In the throat this exudation is of infinite importance, forming, as it does, the characteristic of croup and diphtheria. Two forms of exudation have been described—membranous and pultaceous, and authors have separated angina membranacea and angina pultacea. The only difference between them is the degree of consistence assumed by the exudation. The viscidity or solidity of the secretion seems partly determined by the severity of the attack and partly by the patient's general health. The symptoms of this form of inflammation in the throat do not differ *at first* from the more usual variety. For a day or two simple catarrh exists, but soon the alarming nature of the malady is manifested. The danger arises, in the first place, from the narrowing of the glottis by the exudation; next, from the same effect being produced by spasm of the glottis, set up by the foreign body (the membrane); and lastly, from the constitutional disturbance excited.

[1] Cases. *See* Appendix.

The characteristic of this variety of inflammation is this—instead of a trifling increase and depravation of the secretion in the second stage, a quantity of adherent or flocculent matter is exuded. In the mildest cases it forms flakes, floating in the secretion; in the more severe ones it constitutes a solid, false membrane, adhering to or lining the part, so that perfect casts of the air-tubes are sometimes expectorated. Thus there is a far greater increase of secretion than in simple catarrhal affection, and that secretion departs much further from the normal state. This form of disease may attack any part of the air-passages, the position of the part giving it the distinctive features. We occasionally see an inflamed sore throat with a few patches of this kind hanging about the fauces, and giving rise to no symptoms; but this is a rare circumstance, except during an epidemic, and the presence of the least particle may well excite alarm. It will spread in all directions, and soon present a terrible aspect. In children it runs rapidly down the larynx and trachea, becoming croup. In adults its energy is more often spent on the fauces, in the form of diphtheria. This generalisation will be objected to by gentlemen who hold that croup is altogether a distinct disease from diphtheria. It would be right, however, for them to explain what they mean by a distinct disease. That the one attacks children, the other adults, is very generally true, but by no means invariably so. That there are other broader distinctions is equally undeniable. But the great fact remains, that both are alike the manifestations of an inflammatory condition tending to exudation. Again, it is quite true that what we call in England croup is very

rare in France, where diphtheria is so common; and since the latter ailment has been epidemic amongst us it has, in the majority of cases, presented marked differences from the French form of the disease—it generally is a kind of croupal diphtheria. Many of the varieties met with in practice seem to be due to differences in the constitution of the patient rather than in the type of the disease. Other modifying circumstances are constantly brought into operation. In studying the works of nature we are everywhere met by analogies and similarities, and our clinical observations will become more lucid if we base them on these broad foundations. The exudative inflammations of mucous membrane possess properties in common, which are not to be lost sight of in our endeavours to distinguish them from each other. We seem to get, in fact, varieties corresponding to those of fever. The synocha, synochus, typhus, and typhoid fevers bear just as intimate a relationship to each other, and the one class will be more readily comprehended by a reference to the other. As this point will be recurred to again, we may proceed to notice that the exudation occurs on the pituitary surface, the pharynx, the œsophagus, and even the stomach, as well as throughout the respiratory tract. More; the conjunctiva is singularly liable to it,[1] and sometimes it attacks the skin. It may, in fact, occupy any part of the surface, just as a simple inflammation. Why in one case exudation occurs, while in another there is none, is as much one of nature's secrets, as why one patient is particularly sensitive to typhus, while similar circumstances in another determine typhoid.

[1] Graefe. 'Archiv, für ophthal.,' 1854.

When formed, the membrane may be easily detached from the surface, which remains congested, sometimes ulcerated.

The first appearance of the exudation is not always recognised. A coagulable liquid is effused on the inflamed surface at the commencement of the moist stage. Soon some minute, solidified particles are discerned, and these run into each other as they spread. The exudation may stay here, or another layer may form beneath it, exactly in the same way.

Very frequently, the abundant purulent secretion underneath serves to loosen the solidified portion. But when separated it too often soon forms again. In other cases, it is only partially adherent to the tissue, when blood may be effused and mixed with it, changing its colour; it then rapidly putrefies, and in this state has, no doubt, been mistaken for gangrene. After recovery, a chronic inflammation is liable to remain, as in the simple form, but characterised by some of the symptoms common to the exudative. Relapses are also to be vigilantly watched for.

Much trouble has been taken to elucidate the nature of the exudation. Its toughness, its elasticity, its consistence, its extent, have all been dwelt upon; but these, we have seen, are not very material. It may occupy a small portion, or extend to the minutest bronchial ramifications, without varying its nature; usually, moreover, it is tougher and denser in the larger tubes, and more fluid in the small ones. Here it covers the epiglottis like a glove, or casts of the tubes are expectorated. There it scarcely coagulates. On separating the tough and adherent specimens, its under surface is seen to be studded with red points, which correspond to similar

ones on the mucous membrane, and through these the connection of the two seems to be maintained. On placing a portion in water it is seen to float, and does not dissolve. Alkalies disorganize and partially dissolve it, as does also chloride of sodium. Nitrate of silver and the mineral acids curl it up and harden it. Under the microscope, this substance looks like a fibrinous network, of an irregular pattern, containing in its meshes molecular granules, which resist acetic acid for a long time, but at once turn brown from tincture of iodine. Many pus-globules and epithelial cells are also mixed up with it. Generally nothing further can be made out. In muguet, however, the exudative stomatitis of children, a cryptogamic vegetation is almost invariably found. It was first discovered by M. Berg, of Stockholm, whose observation has been abundantly corroborated; and Professor Laycock, of Edinburgh,[1] attributes diphtheria to the presence of the same fungus. M. Robin has very carefully investigated the production of vegetation on mucous surfaces.[2] Where a vegetation is traced, it may admit of doubt whether it is the essential part of the disease, or whether an exudation, otherwise determined, may not prove a favorable nidus for its development; and it is possible some truth may pertain to each of these views. In respect to muguet, the sporules of the oidium albicans are so constantly present, that the former opinion is for the most part entertained. Besides, this disease is very infectious, easily communicated by children using the same cups and spoons; it has been successfully inoculated. We may sow the seed, assured of seeing a crop grow. On the

[1] 'Medical Times and Gazette,' vol. xxxvii.

[2] 'Histoire Naturelle des Végétaux Parasites,' &c.

other hand, it is rare to meet with a fungus in croup or diphtheria; so rare, that it may fairly be put down to the accidental nidus. M. Trousseau, in his zeal for knowledge, actually inoculated himself with diphtherial exudation, and no effect followed. Still, he admits that this one experiment does not prove that the disease cannot be so communicated. Some other persons, having too much respect for themselves, have inoculated dogs and other animals without results. What are we to conclude, then? Perhaps this—that in some forms of exudative inflammation, the secretion assumes a character very favorable for the growth of the oidium albicans; that this fungus may accidentally appear in almost any exudation; that in stomatitis its sporules seem to compose almost the whole membrane, and their presence is so constant as to constitute the disease; while in other exudations vegetation is only occasionally present. In Professor Laycock's case, the exudation supervened on a lengthened illness, and, perhaps, it might be an aggravated form during the diphtheria epidemic, of those varieties of thrush which appear under such circumstances; at any rate, it cannot be called, from the history, a typical case of diphtheria. Of late, it has been customary to speak of every exudation as diphtherial, but this loose mode of using words is hardly justifiable in so momentous a case; at any rate, it is best explained. A good deal of space is occupied in the present volume in insisting upon the analogies and resemblances of diseases; but the author has no wish, therefore, to confound all similarities with identities. Extremes are to be avoided, and care should be taken, while bringing one portion of a picture into full relief,

not to throw another, equally important, too far into the shade.

Exudation takes place in other states than those mentioned. It is sometimes seen in scarlatina; it is far more commonly associated with measles; rarely, it appears in other conjunctions, especially during an epidemic. Thus a larger class of ailments are brought a link nearer each other by exceptional cases.

SPECIFIC SORE THROAT.

The course of sore throat is greatly influenced by the cause which gives rise to it. The affection consequent on the inoculation of an animal poison is a vivid illustration of this. Besides, we have also to consider how far an ordinary inflammatory condition precedes, accompanies, or predisposes to certain constitutional varieties. Both tubercular and cancerous diseases of the throat necessitate a degree of inflammation, widely as they differ from it in other respects. All constitutional states may interfere with the exact nature of the local manifestation. That specific sore throat which arises from absorption of the venereal virus presents such various appearances, that, to avoid mistakes, it is needful to be always on the alert. It may give rise, in its early stages, to excoriation, erosion, or even to mere congestion of the fauces. The parts look red and raw, and perhaps are also swollen. These qualities may be hid by a dirty white secretion, but are seen on gently wiping it off, or a thickening of epithelium may in like manner disguise the real appearance. Soreness or swelling will then, in certain cases, excite suspicion. A

worse form of syphilitic sore throat terminates in foul, deep, indolent ulcers. These do not cause much suffering; no inconvenience may be felt, except in change of voice, noises in the ears, or constant hawking, when inspection reveals a formidable loss of tissue. The history is extremely important in clearing up the diagnosis, but it is often impossible to obtain a correct one. A much more dangerous variety is the sloughing ulcer. It begins as a mere aphthous speck, but soon displays its formidable character. The sloughing may implicate the carotid artery, and so end in sudden death, unless it be previously tied.

The tonsils are the most constant seat of specific sore throat. The soft palate frequently suffers; then the palate and nose. The larynx is liable to become ulcerated, and sometimes the disease of this organ puts a hasty period to the patient's career.

EXANTHEMATOUS SORE THROAT.

A form of sore throat apparently originating in an animal poison is that met with in the eruptive fevers. This brings us again on the interesting relation which subsists between the skin and mucous membrane. The structure and function of these tissues being so like, we might anticipate some similarity in their diseases, and the author has traced this in many instances. It might have been considered in the last paragraph, but its study was reserved for the present, as only one phase of syphilis belongs to the subject of sore throat.

A chill, a suppressed perspiration, any interference with the cutaneous function, is an every-day cause of bronchitis, cynanche, or some other disease of the mucous membrane. A hundred instances will occur to the

reader. Such things have been put down as sympathy. The exact meaning of the word in this connection has not been defined. It is probable that teachers and pupils, in using it, have generally lost sight of the grand principle, that these similarities depend on textural likeness. Not to depart from our programme, the sore throat of eruptive fevers must have first attention. It is common to the whole class, but more frequent and severe in one variety than another. It constitutes the principal lesion of scarlet fever, and most practitioners have met with it in measles and smallpox. This specific inflammation of the fauces is of the gravest kind, very often proving fatal. Occasionally the rash may be watched extending itself to the mucous membrane, and giving rise to its disease. Probably this happens more usually than is imagined. At any rate, this sequence of events may teach us that appearances very unlike each other may be identical in nature, modified only by the tissues in which they are situated. The disease often first shows itself in the mucous membrane. Inflamed sore throat and smart pyrexia, are the prominent facts. In the early stage, little else may be observed. The fauces are red and swollen. After a while, minute ulcers form and run into each other. Then they become brown, or even black, while pain ceases, and typhoid sets in. Between the mildest and most malignant forms every variety presents itself. The tonsils—always great sufferers—sometimes bear the whole brunt of the disease; and then they may be so swollen and tender, that swallowing is impossible, fluids are returned through the nose, and even the passage of air into the lungs is impeded. The larynx is not often seriously implicated. When any disposition

to the formation of false membrane coexists, the air-tube is more liable to suffer.

Epidemics of the eruptive fevers differ very greatly, and it becomes the physician to make himself acquainted with the prevailing type, as well as to be on the watch for any change. In some epidemics a rapid recovery is the rule, in others convalescence is unusually protracted, in a third class the mortality is far more fearful. So much is this the case, that a confident and hopeful prognosis may be justifiable in one, while in another the gloomiest forebodings must be expressed. The appearance of the eruption is as various as that of the angina. Sometimes we have the sore throat without the eruption—a form, when well marked, I have been in the habit of calling cynanche exanthematosa, and of which I studied a considerable epidemic during the past summer. Further, some degree of uncertainty may be occasioned by the rashes sometimes appearing to mingle with each other. This is especially the case with scarlet fever and measles, between which, in their typical forms, are several links, in which the rashes partake somewhat of each other's characteristics, so that one physician might designate measles what another called scarlet fever, and yet the one would have as good reasons as the other for his classification. Perhaps, after all, there may be fewer fever poisons than has been conjectured. Is it possible that these exanthemata, so near to each other, are in essence but one, modified by the conditions under which it is developed?

The above description best fits the sore throat of scarlatina or measles, but a similar angina is liable to occur in every eruptive fever. In variola there is often a close approach to a pustule; in erysipelas infiltration

of the sub-mucous tissue occurs; but typical cases are more rare than those in which the characters common to all forms are alone distinguished.

The analogy between the skin and mucous membrane extends much further. Let us take another class of cutaneous affections. It shall be vesiculæ. Our example, herpes, so familiar on the skin, so often mistaken on mucous membrane. Herpes preputialis ought to be known to every surgeon, or he will sometimes do his patient grievous injustice. It may present some difficulty, but more blunders happen from forgetting its possible existence than from the absence of indications for diagnosis. This case is introduced because it is parallel to a form of sore throat,—herpetic cynanche I call it,—which is sometimes very troublesome. Every one is acquainted with herpes labialis. Well, this often spreads to the mouth and throat, and, what is of more consequence, it may commence in the latter, and not extend beyond it. It comes on with some severity, so far as the patient's sensations are concerned, and in weakly people with some degree of feverishness. A careful inspection discovers the vesicles situated on red patches. A little later their contents are opaque, so that they are more easily discerned, but they are generally broken in their earliest stage by the passage of food, leaving small, deep ulcers. If any escape, they burst about the fourth day, and give rise to the same ulceration, which is very irritable. It is important to distinguish this herpetic sore throat, because nitrate of silver, or any caustic, will be sure to aggravate it. My speculum and reflector to transmit light will be found serviceable in showing what the disease is. The coexistence of herpes on the lips is an aid to diagnosis.

The preputial form may be cured in a few days by bits of cotton-wool, to absorb the secretion and keep the part dry. Herpes on mucous membrane produces small ulcers, and the chief obstacle to their cure is the moisture; all irritants, too, make them spread with great pain. The different appearance given to this ailment by the conditions in which it is placed—on the dry, external skin, or the moist, internal lining—is a great encouragement to pursue inquiry in this direction. Pemphigus, or vesicular fever, as it is often called, shows us similar appearances on the skin and mucous membrane, and often extends to a large surface of each. After all, can we point out much difference between herpes and pemphigus, except in severity or intensity?

Cutaneous hæmorrhages have also their counterpart in the mucous membrane. We might, indeed, anticipate that the more vascular tissue would be most obnoxious to these affections, and such, I believe, is really the case. Purpura constantly affects the fauces. In one fever we see petechiæ on the skin; in another, a similar affection of the mucous membrane. Is not scurvy an additional example?

Another class of skin disease—pustular. Acne and sycosis, consist in follicular suppuration, and so are intimately associated with an affection of mucous membrane before described. Need the reader be asked whether he has ever seen a stye?

Another class,—where there is not disorganization to trace. Does not pruritus torment both structures alike? How often, too, is nettle-rash associated with irritation of the lining of the stomach! Can a similar condition exist in the two parts? Lastly, to

complete our analogy, either tissue may become the seat of cancer.

CYNANCHE PAROTIDEA.

When inflammation affects the salivary glands, some variation of the phenomena is observed. Swelling and pain are now the prominent symptoms. Suppuration is rare, but metastasis is common. Our best instance is mumps, for the parotid, being the largest and most important of the salivary glands, is more often attacked than its fellows. The latter, indeed, give rise only to trifling ailments, and even parotitis is seldom under the notice of the physician, unless metastasis or some complication take place. Of these, inflammation of the tissue around the gland is most common, and it frequently results in suppuration. Some have thought, indeed, that this inflammation in the cellular texture was the whole disease, but this was too hasty a generalisation, for Virchow[1] has found the gland itself inflamed.

In connection with the subject of metastasis, it may be proper to allude to a somewhat analogous sympathy between the tonsils and the ovaries, which I first pointed out to the profession in the 'Medical Times and Gazette' for September, 1859. Since then I have met with numerous cases, some of which are related in the Appendix. As the tonsils will again come under notice, the subject is only mentioned here for the sake of showing what mysterious relations subsist between diseases which, in other particulars, seem far removed from each other.

[1] 'British and Foreign Medico-Chir. Rev.'

DIAGNOSIS OF SORE THROAT.

In every case brought under his notice, the physician's first care is to get a definite notion of its nature. Until he has arrived at a diagnosis he can only grope his way through a dark labyrinth. Although requiring a good deal of care and patience, this is not so difficult as many imagine. It is quite true that experience is as valuable here as in other departments, but not in the sense in which the word is often applied. Thousands of cases fail to add to the real knowledge of an unobservant man, while one of an opposite character will diligently extract from a few the choicest and truest experience. It is the old tale of "eyes and no eyes." To gather knowledge, men must have the "art of seeing." We must dig in nature's mines before we get the precious ore. Everything worth having is hid. We do not pick up jewels in the streets. All that distinguishes civilised nations from savages has been won by work. Our coal, our iron, our machinery, our railroads, our ships, all represent untold toil. And so with knowledge—only the diligent get it. To find, we must seek. To understand nature, we must interrogate her works. The construction of every wild flower is veiled from the common gaze, and requires much labour to demonstrate. Is it strange then that man, so "fearfully and wonderfully made," should not be understood at a glance, or his diseases comprehended without effort? Let us, then, bring to the study a corresponding diligence. The means of investigation at our disposal are the same as in all the natural sciences—the five senses, assisted by every device which can be of service. These

it is our business to educate; not this nor that, but all, so that one may check another, and that we may pass judgment on the whole evidence we can elicit. We are able, too, to call in other witnesses, though these are much less trustworthy. The senses of the patient, and of those about him, will give their testimony. The history will, of course, depend on these alone. By them, too, we often complete what would otherwise be fragmentary, and are able to draw distinctions and indications which we otherwise could not. They are therefore essential links in the chain of evidence. It is from others we obtain information about the patient before we see him. In this we must get a statement of facts, and not opinions. The notions of the friends are not only crude, but very often only suppositions, or fears without foundation in fact, and these ought never to influence the judgment. Well-attested facts are of the utmost value, but in eliciting them it is requisite to avoid all leading questions, discard all theories, and, if possible, conceal from the witness the exact bearing of his communication. For this purpose, some adopt the plan of making the patient, or a friend, or both, relate the history without any interruption, and of questioning them afterwards with a view of settling points left doubtful, or filling up gaps in the narrative.

Passing to the evidence of our own senses, let us first consider the general impression made upon us, and then separate this into its component parts. In this general impression sight is not the only sense employed. It is true we see much, but we hear too—the breathing and voice, for instance. Sight, too, gives us a notion of feeling, to be corroborated or corrected by

actual touch. Smell must always be included, and this cannot but convey an idea of taste. It is clear, therefore, that a general impression may be conveyed to the mind as soon as the patient comes within the range of the senses. Much might be learned by prolonging this stage of the investigation.

Before a word was spoken, I have sometimes pointed out to medical friends the nature of a case which vigorous scrutiny corroborated. Not that such a diagnosis ought to be acted on. It merely shows how much may thus be learned. Posture, gait, aspect, expression, colour, excitability, flushes, emaciation, manner of breathing, physiognomy, and the many other points which may thus be studied, should all have a place in the physician's memory, for all are in turn to be more closely questioned. To gain all this information so quietly and unostentatiously is, to my thinking, the surest and best way. I often stand at the bedside of difficult and dangerous cases, in silent contemplation of the phenomena presented. Thus I gain a more accurate general impression, correct the errors of a momentary interview, analyse and compare my observations, and so get a more perfect portrait of the disease. The reader who tries the experiment will be surprised to find how much can thus be learned; every day something new will reveal itself to him. We would fain dwell on this interesting topic, but it belongs to the subject of disease in general. Having exhausted this source of knowledge, we may fairly draw from others, and accordingly now pass to a few remarks in reference to throat diagnostics specially.

Hearing is often called into use, both as to voice and breath. Harsh, loud breathing, hoarseness, diminution

or loss of voice, at once excite attention and demand an explanation.

Feeling tells of sensations, both of the observer and observed. Thus, by touch we ascertain the presence of tenderness, hardness and roughness, softness and smoothness. To touch in connection with sight belong increase and diminution of size. Palpation of the throat often reveals the presence of unsuspected symptoms, and the practitioner should endeavour to gain from it the largest amount of information with the least possible pain or inconvenience. To touch and hearing also belong the phenomena of percussion and auscultation. The morbid states of the throat and chest are so intimately connected, that it is absolutely necessary to train the ear to a skilful use of the stethoscope. Often, indeed, throat cases entirely turn on the results obtained by this invaluable instrument.

Sight is the most important sense of all. The proverb says, "seeing is believing," and pretty generally this is so. In all cases of sore throat inspection is to be had recourse to. It is often so carelessly done that nothing is gained by it. The tongue must be well pressed down and drawn rather forwards. A spoon—so often employed—is for nearly all purposes less useful than the finger. If the bowl be placed in the mouth it hides the fauces as effectually as the tongue itself, frequently more so, for many patients can display the throat very completely. If the handle be used, its sharp edges are apt to give pain. The common, pocket, tongue-depressors are very useful, but their shape is not well adapted for more than cursory examinations, and for these a paper-knife is usually handy. I have had a depressor made of a somewhat caudate shape, so as to

expand over the base of the tongue and hold it firmly. A second blade is required, of a smaller size, for children. These screw into an ebony handle, and are thus portable. It will be found a very great aid to laryngoscopists and operators alike.

Another instrument I have had constructed is a speculum of the ordinary glass kind; covered with caoutchouc, but oval instead of cylindrical, and of suitable sizes for the mouth. For inspection, it is preferable to anything. It holds down the tongue, and conducts the light to the point. In conjunction with this I have employed a condensing mirror to illuminate the throat; the reflector of the laryngoscope will answer the purpose.

Such a speculum is very convenient for localizing topical applications, especially where timidity on the part of the patient renders this difficult. In order to use it without interrupting the sight, I have had several of my instruments bent at a right angle, and made more slender than usual. It is surprising, when the fingers get accustomed to them, how much assistance they give.

The immortal Liston suggested[2] placing a reflector (warmed) in the fauces. Such a one as dentists use is easily obtained. With this I tried to combine the use of my speculum, but without any great success. I understand that Mr. Avery some time ago had a reflector fixed on to a cylinder. My next step was to use a large concave mirror to throw light on a reflector at the back of the mouth, but this was inconvenient, and I did not think of perforating the mirror till I saw the ophthalmoscope in use. Before I completed my design

[1] The above instruments are sold by Mr. F. Walters, Moorgate Street.

[2] 'Practical Surgery.'

Professor Czermak[1] solved the problem, satisfied the Germans and French, and brought his laryngoscope to this country. His adaptation is very complete, and will suit most people. His reflectors do not magnify—mine did. Perhaps, on the whole, it is best to see the parts of their natural size, though I like to magnify in some cases. In the practice of laryngoscopy we place in the throat a small reflector, previously warmed, to prevent its condensing the breath. Light, either natural or artificial, must be directed upon this reflector, by means of a concave mirror, through an aperture in which the observer looks.

A good deal of tact is needed. The beginner may merely see the base of the tongue and epiglottis, or, turning the face of the reflector upwards, the posterior surface of the velum, &c. Proceeding carefully and patiently, he will soon be able to obtain a view of the pharynx, and at length behold the interior of the larynx itself.

It is not to be supposed that the mere possession of the laryngoscope will enable any one to read off morbid changes. The needful tact has to be acquired. Patience is necessary to success, and this ought not to frighten any one, for it is equally true of the microscope and ophthalmoscope. Some cases in the Appendix will show its medical use. Physiologically, it is intensely interesting. The state of the parts in health must first become familiar. Then we may go on to observe changes in disease. At present the subject is in its infancy, but we may hope it will rapidly grow.

Such are the means at our disposal for the investiga-

[1] 'Der Kehlkopfspiegel,' von Dr. Johann N. Czermak, Leipzig, 1860.

tion of throat disease. Once more a warning may be uttered against neglecting general symptoms in the eager investigation of local phenomena. No one ought to content himself without drawing from all sources of information. We ought not to seek to excel in one province by the neglect of others, but to bring a full knowledge of all to bear on every individual case. Even a moderate skill in each department will preserve from errors into which pure specialists are sure to fall. All the modern improvements are to be had recourse to, but this must be as additions to, not as substitutes for, the resources of former times.

TREATMENT OF SORE THROAT.

Before proceeding to the lesions of the separate portions of the throat, it is proper to make a few remarks on treatment. In every case the age, sex, constitution, and family history of the patient, with other circumstances which make up his individuality in reference to disease, require consideration. In the throat, as in other organs, numerous modifications are thus induced, influencing alike prognosis and treatment. It is a careful estimate of these elements which distinguishes the able practitioner. In nine cases out of ten these points will make clear what is otherwise obscure; often they will suggest a relief which is speedy and certain; sometimes they raise our hopes, at others they confirm our fears, but in no case do they deceive us, if carefully balanced with the local manifestations. By their aid science unfolds a revelation unintelligible to routine; they are the degrees on the disease-barometer

by means of which we tell unerringly of coming storm or sunshine.

In affections of the throat it is often our first care to prevent disorganization, and that not of large extent, for what in other organs is merely trivial may here prove fatal. Our means of doing this, for the most part, resolve themselves into the arrest of inflammation and the prevention of some of its consequences. At the head of these has usually been placed—

Bloodletting.—In modern text-books this powerful agent is directed to be used, though even the public are aware how seldom it is actually resorted to. Writers ought to state the treatment they actually employ. What can be more inexcusable than to inculcate a practice which is never followed? There would be much less difference of opinion if clinical experience were more frequently appealed to, but authors and teachers find it easier to drive on in the ruts of the last half century. It is not requisite here to enter into the controversy on bleeding, but it is right to state, that phlebotomy is so seldom prescribed for diseases of the throat, that he who proposes it need to be fully prepared with his reasons for doing so.

Leeches are constantly ordered, and most practitioners testify in their favour. It has been questioned by others, whether the larger part of the benefit is not due to the fomentations which follow. Leeches certainly do not drain the congested part of its blood, according to the popular belief. In children a few leeches are as potent as venesection in adults.

Scarification of the inflamed part may be advantageously adopted. The engorgement is at once relieved, and the effect of the remedy, if judiciously

employed, quite surprising. It is particularly adapted to some cases of tonsillitis. The gum lancet is so often used (and perhaps abused too), that it is a wonder a similar proceeding should not have been more frequently carried out in other parts. A single scarification will produce more effect than opening a vein, and this at almost no expense of the vital fluid. Even in infancy it is safe, as well as efficacious. The lancets I employ for the purpose are mounted on long slender handles, such as oculists use. They may also be bent at a right angle. My speculum will then be found of great assistance.

Emetics of all kinds are often employed, especially in the exudative forms of sore throat, under which further remarks will be found about them.

Antimony, mercury, purgatives, &c., have been used on the same principles as in other diseases, and have been alternately blamed and praised. Their employment must be based on general principles. No doubt mischief has been done by the improper use of powerful agents, but to them we are glad to fly. Sometimes, indeed, their capacity for good and harm seems equally balanced, and this we can understand. Unless we would reduce ourselves to the utter helplessness of the expectant school, or delude ourselves with dreams of infinitesimal potentialities, let us not discard agents because they are powerful. Poisons!—we are told—potent poisons! Be it so. The more deadly the poison, the more certain I am that its effect will be produced. If the action of that poison can be regulated, and in certain conditions prove beneficial, let who will deride, science has helped me to get life from death, "meat from the eater," medicine from the poison.

Iodine is a drug of great value. There are forms of throat-disease which yield to its influence, and to nothing else. Its effect on enlarged glands is well known, and it is often applied locally. The tonsils are sometimes painted with it, but as the stimulating action of the drug on the surface often results in induration, fumigation is preferable. The salt formed with potassium is most suited for internal use. In strumous or anæmic cases, I much prefer the iodide of iron. All alteratives require that the system be in a condition to receive them, or they only do harm.

Chlorate of potass exercises great influence on mucous membrane. In some forms of stomatitis it is almost a specific, and since it has become generally employed, has been the means of saving many a life. It is useful both internally and as a topical application.

Chloride of sodium.—I have used this salt for somewhat similar purposes as chlorate of potash, and with some success. It has appeared to me more adapted for chronic cases of foul, indolent ulcerations in cachectic subjects where the chylopoietic functions were much deranged. As an emetic, I have great confidence in it, possessing, as it does, saline properties, with their beneficial action in the circulation. A strong solution of it is also suited for topical application in exudative inflammation.

Nitrate of potash is an excellent saline for throat cases, nor is it destitute of local efficacy. Mixed with sugar, and slowly dissolved on the tongue, or in the form of lozenges, it is a popular remedy, and for mild, inflamed sore throat its reputation is deserved.

The *mineral acids*, and other *tonics*, will all be

required in turn. The most constantly in request are quinine, tincture of the sesquichloride of iron, and nitro-muriatic acid; but each practitioner will have his favorite formula.

Guaiacum is relied on by some in the early stages of quinsy, and Mr. Harvey[1] has much extended its use.

Senega is, in large doses, emetic. In smaller ones it increases several of the secretions, especially those of the mouth and air-tubes. It seems to facilitate the separation of false membranes, and is therefore often made a vehicle for more active remedies in croup and diphtheria.

Hydrocyanic acid and digitalis are both powerful sedatives, and their employment is not unattended with risk when the physician is unable to constantly watch the patient. I have almost discarded them for the following drug.

Aconite.—I have long been in the habit of prescribing this medicine in various complaints. As a local application in painful affections it is frequently used, and, since the work of the lamented Fleming, occasionally given internally. From the result of many hundred cases I venture a few remarks on its action, and strongly recommend it to the profession, hoping on a future occasion to give a more detailed statement of my experience. Being a very energetic poison, it may be well to offer a caution as to the dose, which in almost all books is overstated. It is quite true that a single dose of five minims, or even more, may be administered with benefit; but, generally, repeated doses of a much smaller amount will be most advisable. Two minims of the tincture of the London Pharmacopœia may be

[1] 'The Ear in Health and Disease.'

repeated three or four times a day, or more. As a rule one minim will be enough. In rare cases three may be required, and occasionally I have exceeded this. The effect of the larger doses will, however, be gained by a repetition of the smaller ones. This is no trivial matter. A cautious use of this medicine is unattended with any material risk; but, if recklessly pushed, it may undoubtedly destroy life—rapidly and unexpectedly, for its poisonous properties develop themselves rather suddenly if the first indications of its action be unheeded. It is a cumulative poison, and, consequently, is not to be prescribed in increasing doses. All the good effect may be obtained by small quantities, repeated at longer or shorter intervals, according to the rapidity of the action desired. Although I have used it in thousands of cases, I have never produced alarming symptoms of poisoning, and I know no medicine which less frequently disappoints my expectations. I have given it once, twice, and thrice a day, for a considerable time; and every four, three, and two hours, for a shorter time. Rarely, I have repeated a dose every half hour, carefully watching the patient all the time. After a few doses, sometimes after a single one, its action is observed. The pulse is reduced in frequency and power. In some cases the power is increased, the frequency diminished. The skin becomes relaxed and bedewed with a gentle perspiration. Nervous irritability and excitement are allayed, a calm comes over the patient, and often sound sleep returns after a long absence. The pain is relieved almost as certainly as when it is locally applied for neuralgia. Clearly, then, it is a valuable sedative, exercising a marked influence over the heart. It was some appreciation of these pro-

perties which caused it be recommended in heart-disease and acute rheumatism, but there are few who rely upon it now. I have, however, obtained excellent results. If a drop of the tincture be placed on the tongue, it is found to be acrid and bitter, and this taste is soon followed by a numbness or tingling in the mouth and fauces. Now, when the full action is produced, in giving this medicine, a similar sensation to this is perceived in other parts. The patient will declare or complain that he feels "numbed," or that he has "the pins and needles," or that he feels "just as if his feet had been asleep." This sensation may be very local—confined to the toes, fingers, or eyelids; or may extend up the extremities, almost over the whole body, according to the susceptibility of the individual. The remedy must now be discontinued, or the dose diminished, and only given just often enough to keep the system under its influence. This sensation is to aconite what salivation is to mercury. By it we shall not be misled. Like salivation, it may sometimes seem to fail, at others, the effect may follow a single dose, and on the whole, it is a certain measure of the patient's tolerance of the drug. The reader may easily produce the sensation on himself by taking a drop or two in water, two, three, or four times a day.

This medicine is useful in all febrile ailments; in nervous excitement; indeed, whenever the heart's action is increased. There are few diseases in which I have not exhibited it. I often make it serve the place of salines, and in many cases it is an excellent substitute for digitalis. The latter drug I now seldom use. It is confessedly uncertain, and, according to my experience, not nearly so safe as the former.

A few cases in the appendix will show the use of aconite in sore throat; and I hope to have an early opportunity of illustrating its action in other diseases. If sufficiently diluted, this medicine is tasteless—a recommendation of no small value with some people. For children, a little syrup makes it as palatable as sweetmeats. If not diluted enough, it produces numbness of the fauces by its contact. This property of acting locally on the membrane may be seized for medical purposes. I have given it in the form of lozenges, as well as powders, made by rubbing the tincture with a few grains of sugar in a warm mortar, which causes the spirit to evaporate. A gargle may also be carefully used; it should not be too strong. Besides these modes, we may paint the membrane with the tincture, diluted with glycerine. It arrests pain, and sometimes put a stop to inflammation; but, if carelessly done, is exceedingly unpleasant. It may paralyse the soft palate for hours. This is not desirable, because in such case the uvula falls on the epiglottis, and causes a suffocative cough, or feeling of choking, which, unless the patient understands the cause, and how to act, will alarm him terribly, nor without some reason.

I have not thought it requisite to enter here into any account of the uses to which aconite is every day put by the profession. Its active principle, aconitina, is best adapted for external use, since its strength is such, when pure, that Dr. Headland[1] has calculated the tenth part of a grain would be certain death to an adult man. This alkaloid may be diluted for internal use, and it has been stated that such a solution would be more certain in its effects than the cruder

[1] 'Action of Medicines.'

preparations. This does not coincide with my own experience. I do not deny that various specimens of the root must differ in the quantity of the active principle they contain; and, therefore, that the tinctures will differ in strength. The fact is, the separation of aconitina is so difficult and expensive a process, that a pure specimen is rarely to be found. Moreover, its very potency necessitates greater accuracy in dispensing than can always be obtained.

Fomentations are daily prescribed in all painful affections. They are useful adjuncts in throat disease, but, as a general rule, are quite secondary to

Inhalations.—The contact of watery vapour with inflamed mucous membrane is very soothing. It cuts short the congestive stage by a supply of moisture, and removes the dryness, heat, and itching. It penetrates throughout the respiratory tract, and often produces more calm than powerful anodynes. Moreover, the vapour may be easily medicated. The common inhalers are more trouble than they are worth. I usually get the patient to breathe through a large cup-sponge which has been dipped in hot water and rapidly squeezed. A less efficacious method is to lean over a large basin filled with boiling water. The heat may be kept up by the aid of a spirit-lamp.

Fumigation.—Vapours which are too irritant to be drawn completely into the lungs may be applied to the throat. Mercury, iodine, and some gases have been occasionally tried for this purpose; but I have no considerable experience of this method. To carry it out effectually, but confine its action to the fauces, cannot be easy. The only way for a patient to safely fumigate his own throat is to use a common inhaler, half full of

hot water, with which tincture of iodine or a similar drug is mixed. He will seldom really breathe the vapour.

Gargles are both popular and time-honoured. Their action, however, is not so extensive as many imagine. They come in contact only with the anterior surface of the velum and uvula, and a small portion of the tonsils; they cannot reach the upper and back part of the pharynx, and consequently are useless for disease located there. Nevertheless, we cannot dispense with them. In diffused affections, they occasionally exercise a surprising effect; and when one portion of the membrane becomes better from their use, the improvement sometimes seems to extend further than the local application of the remedy. Diluted mineral acids are sometimes prescribed as gargles. Their action on the teeth should generally lead us to prefer other astringents.

Injections.—We have now contrivances for injecting fluids into the nares, back of the pharynx, and even the larynx, and consequently are able to judge better of topical applications. To inject, with skill, the diseased part is certainly an operation of some nicety, but the results are such as to amply repay the trouble.

Sternutatories are rather old-fashioned, but in disease of the pituitary membrane they are a valuable means of cure. Snuff-takers will readily employ them.

Insufflation of powders into the throat—much more into the larynx—strongly as it has been recommended by some, is a practice I am unable to follow to any extent. As a general rule, other applications will be quite as serviceable, and much less distressing, or even

dangerous. I freely admit, however, that in exceptional cases it may be worth a trial.

Alum is one of the oldest of topical applications. At one time, Velpeau highly extolled it in acute tonsillitis, but it has not answered the expectations inspired by that eminent authority's encomiums. As an ingredient of astringent gargles it is unexceptionable, and I have sometimes painted the fauces with a strong solution of this salt.

The sulphates of zinc, iron, and *copper* have, in like manner, been alternately employed by me in several states of the membranes.

Linimentum Æruginis is a very old stimulant, and slight escharotic for indolent ulcers, which still holds its ground.

Nitrate of silver is, perhaps, the most constantly used topical remedy. It is employed both solid and in solution; the latter being conveyed to the part by camel-hair or glass brushes, by sponges mounted on whale-bone, and by cotton-wool held in a pair of forceps. There is no need to dilate on its properties. It acts almost like a specific on diseased mucous membrane, and is certainly the sheet-anchor in many throat affections. Yet it ought not to exclude other remedies, and lead us into routine practice.

A somewhat interesting controversy has been carried on respecting the extent to which topical applications are available in laryngeal disease. Dr. Horace Green[1] declares that he is in the habit of passing the ordinary probang, charged with solution of nitrate of silver, into the trachea. Others, among whom is Mr. Erichsen,[2]

[1] Op. cit.

[2] 'Science and Art of Surgery.'

deny that any such thing has been done, and have proposed syringes, in a variety of forms, to supersede that instrument.

A good deal of useless argument has been expended on both sides. One author describes as easy what another declares impossible. The majority of those who read both statements seem to conclude that, at any rate, the operation is difficult, and there they let it rest. It does seem to me that they who oppose the practice have scarcely given it a candid consideration. I confess I feel it somewhat unsatisfactory to be assured that no probang can pass "beyond and between the vocal cords," and yet for this assertion to be followed by confessions that a tube may be introduced for the purpose of artificial breathing, and this admission again by a description of a laryngeal syringe which is to be passed "between the lips of the glottis." If it be granted that a body of any kind has been passed down to the vocal cords, is it not idle to dispute whether it can go "beyond and between them"? Must not its further progress depend on the relative size of the opening and the body, and on the command possessed by the operator over the instrument in its then situation? That the ordinary throat probang is not well adapted for this purpose may be readily believed. But this proved is not enough. Many men believe they have performed this operation. They are bluntly told they are mistaken; because, forsooth, others have failed. A very good specimen, this, of the *non sequitur* mode of reasoning!

The reader is requested to study, not the question whether this operation has ever been accomplished, but the far more important one, is it desirable; and if so,

whether he can himself perform it with reasonable facility. To help him to a solution, he is referred to the works of Dr. Horace Green,[1] and the 'Report of the New York Academy' on the practice, as well as among British authors—Professor Bennett[2] and Professor Erichsen.[3]

Caustics.—Concentrated muriatic acids and other strong caustics have been employed in diphtheria and in gangrene. Their application is made on the same principles as to other parts.

An artificial opening into the air-tube is to be made when suffocation is imminent. The principle involved is the same whether laryngotomy or tracheotomy be preferred. The object is to enable a patient to carry on respiration, and in the case of foreign bodies being impacted to remove them. The operation has been practised in acute and chronic laryngitis, in croup, œdema, ulceration, exfoliation of the cartilages, and tumours, as well as in various injuries. It is indicated whenever there is an impediment to inspiration situated high enough for the opening to be made below it. Some have proposed tracheotomy as a palliative in general complaints, such as epilepsy and hydrophobia, but the experience of the profession is not at present extensive enough to show how far it is useful for this purpose.

Before proposing such a proceeding, we ought certainly to weigh most carefully the chances of the patient; but when once convinced that nothing else can save life,

[1] Op. cit.

[2] 'Pathology and Treatment of Pulmonary Consumption,' 2d edition, 1859.

[3] Op. cit.

and that this measure holds out some prospect of doing so, it is criminal to conceal our opinion. Perhaps the different results of this operation, in the hands of English and French practitioners, is to a great extent caused by our so frequently postponing it till there is scarcely a chance of success. It is often stated on this side the channel that the French perform tracheotomy when less severe measures would have terminated in recovery. There may be some truth in the observation, which is equally applicable to many other proceedings. But the implied censure could easily be answered by a *tu quoque;* for is it not just as culpable to delay a remedy until its employment is a mere saving of appearances? True, no man of feeling likes to advise a surgical operation while he retains a hope that other means may give relief. On the other hand, our feelings are not to be suffered so far to interfere with our judgment as to omit even a *dernier ressort.*

In this matter we trust that the British profession will give a more candid consideration than hitherto to the practice of their French neighbours. The New Sydenham Society has done good service by publishing a translation[1] of the works of some French authorities in which this subject is discussed. The circulation of such a work throughout these islands cannot but be productive of good.

Details respecting the operation will not be looked for here; they are found in all standard surgical works. It may be remarked, however, that the key to success is care in the after-treatment.

[1] Vol. III, entitled 'Memoirs on Diphtheria,' consists of translations from Bretonneau, Guersant, Trousseau, Bouchut, Empis, and Daviot.

CHAPTER II.

NOMENCLATURE.

Diseases may be classified in various ways to serve different purposes, and a number of terms are consequently employed in describing or designating them, which apply to sore throat as well as other affections. Examples are acute, sub-acute, chronic, in relation to time or severity; strumous, cachectic, in relation to diathesis; catarrhal, exanthematous, specific, in reference to cause. From what has preceded, it will also appear that inflammation of mucous membrane might be further classified according to its terminations or consequences. We might, for instance, arrange our subject somewhat after this fashion:

Inflammation.

Acute, as in inflamed sore throat.
Sub-acute or chronic, as in relaxed sore throat.
Terminating in ulceration, as in ulcerated, follicular, aphthous, clergyman's, and syphilitic sore throat.
„ gangrene, as in malignant sore throat.
„ effusion, as in œdema uvulæ and œdema glottidis.
„ suppuration, as in quinsy and abscess of the pharynx.
„ induration, as in enlarged tonsils and elongated uvula.
„ exudation, as in croup and diphtheria.

As, however, the disease is sometimes confined to a portion of the membrane, another division suggests itself according to the position, and that an exceedingly useful one in practice. It may be exhibited in the following manner:

Sore throat.

Seated in the pharynx, as in pharyngitis, abscess, cancer, and aphtha.
„ tonsils, as in tonsillitis, quinsy, hypertrophy, ulcer, &c.
„ larynx, as in laryngitis and croup.
„ glands, as in parotitis, &c.

Having already grouped the several forms of sore throat together, so as to exhibit their mutual relationship, we shall now take the liberty of combining the two modes of classification presented above, so as to obtain a definite and intelligible plan for our consideration of the more important varieties of sore throat in detail. Thus, first we shall take inflammation, with such of its consequences as are most conveniently generalized with it, viz., ulceration and exudation; and afterwards devote a chapter to the several organs,—tonsils, larynx, &c. The slight repetition occasioned by this will be amply repaid by the convenience of such an arrangement.

CHAPTER III.

INFLAMED AND RELAXED SORE THROAT.

INFLAMED sore throat is a convenient term for an inflammation involving the entire faucial mucous membrane. Uvula, velum, pharynx, tonsils, &c., are all implicated. Where one organ bears the brunt of the attack, the others suffering in a minor degree only, it is better to call it tonsillitis, pharyngitis, &c., as the case may be, reserving the expression "inflamed sore throat" for the more diffused affection. The attack has a catarrhal origin, and is mostly preceded by coryza or lacrymation. As it travels along the membrane, the throat becomes sensibly sore. It feels dry, or itching, or hot, or even painful. Swallowing aggravates the pain or uneasiness. Respiration is seldom impeded. On looking into the fauces, evidences of the congested state are at once seen; the redness and swelling are marked. Occasionally the sympathetic fever runs high. It is important, therefore, to remember that more serious ailments commence in a very similar way; and that this, managable as it usually is, sometimes gives the attendant anxiety as well as trouble. The consequences of a single attack may be grave, while a repetition of them frequently lays the foundation of lengthened suffering. It is, therefore, needful carefully to weigh the circumstances before pronouncing a positive

opinion as to the nature or treatment of any case. It must be provoking for a practitioner, who has jauntily assured a patient that he has only a common cold, to find, on his next visit, unmistakable symptoms of scarlet fever; besides, such an oversight would inevitably shake the confidence which had been previously reposed in his skill.

When the diagnosis is determined, the chief point is not to over-dose the patient. Confinement to the house for a day or two, or to bed even, with a milk or farinaceous diet is to be advised; but anything more debilitating is unwise. No loss of blood, even by leeches, is required. Very rarely indeed, in the diffuse form, will scarification be justifiable. Calomel, antimony, and other potent remedies, sometimes recommended on the score that the complaint is inflammatory, are best let alone. They weaken the patient, and prolong convalescence. In all probability, left to his own choice, the patient will regulate his diet with great propriety, choosing arrow-root, sago, tapioca, panada, gruel, or something equally innoxious and soft to the throat. At the same time, it does occur that a sore throat affords us a good excuse for reducing a patient who really requires this with another view than curing his cold. The inhalation of steam will often afford much comfort. If the fever require it, a diaphoretic may be given, preceded, for the most part, by a saline aperient.

Of all medicines, however, the aconite is the most universally beneficial. It acts on the local ailment as well as on the constitutional sympathy. It cures without debilitating. Nor is there any danger of ill effects from a chill during its use.

Several kinds of traumatic sore throat are of frequent

occurrence. Poor children attempt to drink from a kettle of boiling water, and are sadly scalded. This injury mostly involves the larynx; so that œdema of the glottis is to be expected, calling perhaps for laryngotomy. Doubtless this arises so often from some of the hot water being sucked into the air-passage, by the effort to scream which instantly follows the pain. Another variety is caused by acids or other liquids being swallowed, and in this the food-passage is the most constant sufferer. In attempted suicide the liquid is usually completely swallowed, and the injury to the throat becomes of secondary importance. In accidents it is at once rejected, and the chief mischief happens to the mouth, epiglottis, and pharynx.

In all these cases prompt and appropriate treatment is needed. Our first indication is to neutralize the poison, next to stay its destructive action, and then to contend with the inflammation set up. Injuries involving the external parts, such as cut throats and crushing of the trachea, belong to the province of surgery.

Erysipelatous inflammation is liable to occur in the throat, and its treatment is to be conducted on general principles. Should the larynx be attacked by this form, the œdema set up will very likely require it to be opened.

RELAXED SORE THROAT.

Chronic inflammation may follow the acute attack, or it may arise only as such, or at most in the sub-acute form. This is called relaxed sore throat. Here we have no feverishness, and the local symptoms are much

milder, though not more tractable. The congestion is passive. Instead of intense redness, the membrane is often paler than usual. Relaxation is, in fact, the state with which we are brought into contact. Our treatment is more various and difficult, though for the most part it is local. If there be irritability, the soothing effect of inhaling steam should have a fair trial. It will often, however, merely supply moisture, the nervous irritation only yielding to a dose or two of aconite. As the local effect of this drug is as marked as the constitutional, and in these cases more so, it should be obtained. This may be done by getting the patient to gargle a moment with the mixture before swallowing it, or the medicine may be given in powders or lozenges, or a gargle too strong to swallow may be used, or the throat may be painted with the tincture diluted with glycerine. When the mildest possible stimulant is needed to get rid of the relaxation, cayenne lozenges or jujubes are both pleasant and effectual. Black currant jelly enjoys a popular reputation, which it well deserves; for it is, in truth, an astringent, and that one of the most agreeable that can be suggested. The gargle is a more effectual application when a stronger agent is desirable, but it is not brought into contact with the whole surface. The liquid does not pass into the pharynx, and its value is consequently much confined to cases in which the anterior part of the velum, uvula, and pillars are inflamed. When it is desired to reach the posterior part, fluids can be readily passed through the nose by means of a tube attached to an elastic bottle, as proposed by Mr. Yearsley.[1] But the most valuable

[1] 'On the Throat.'

means of topical application, the most generally useful, and almost always sufficient, is the throat probang, consisting of a small piece of sponge attached to a whalebone rod. Brushes of camel hair, or glass, are more frequently employed.

In strumous constitutions, relaxed sore throat will often be tedious and obstinate. Treatment of the diathesis is then not to be neglected. The iodide of iron suits both children and adults; change of air, and sea-baths, and the most powerful tonics ought sometimes to be combined. By attention to such things as these, the physician may prevent the relaxation becoming a habit, or even remove it when it has done so, thereby preserving his patient from serious danger, and conferring on him a lasting benefit.

Rheumatic persons are very liable to this form of sore throat, which modifies the treatment again. The iodide of potassium is the best prescription for internal use. On the other hand, this drug occasionally seems to produce a subacute cynanche. That it produces coryza is well known, and some persons are unable to take it for this reason. We need not be surprised, then, that its effect may sometimes fall on the other portion of the mucous membrane.

CHAPTER IV.

ULCERATED SORE THROAT.

This term is applied indifferently to all cases in which the process of ulceration has taken place, and is consequently indefinite. In this chapter it is restricted to ulceration of the mucous membrane consequent on simple inflammation. Some specific forms will be considered further on. When confined to the fauces proper, its symptoms are not alarming or very troublesome. In the larynx, all forms of disease are so. Erosion or ulceration, following inflammatory sore throat, gives rise to most of the symptoms of the relaxed form. The painful deglutition is not well marked, but the hawking or coughing up of the secretion which accumulates is very distressing. Inspection displays the solution of continuity, large or small. It may be a mere breach of surface, or a deep, round, definite ulcer of any size. Many a case which has for a long time passed as a relaxed sore throat, and been treated as such, will be found, on careful examination, to be ulcerated. A hasty glance may not reveal this state, but if every care be taken to obtain a good view it will be detected. Careful practitioners often obtain great credit at the expense of their more off-hand brethren by such a discovery, since the old adage here holds good, "to know the disease is half the cure." My speculum and a reflector will be found very useful in this investigation.

Ulceration most frequently takes place in cachetic constitutions, especially in scrofula. It very rarely gets well by itself, though it is tolerably tractable under judicious treatment.

Hepetic ulcers should be discriminated. Their history, or the co-existence of catarrh, often slight feverishness, will assist the diagnosis. Their appearance, too, is generally less indolent; in fact, they look irritable, as they are, and suggest soothing inhalations which are appropriate.

FOLLICULAR ULCERATION.

Ulceration often seems to affect most the lacunæ or crypts, and sometimes it is confined to them from the beginning. These follicles appear to take on a low form of inflammation; they gradually enlarge, become small, red points, and after a while ulcerate. All this time the intervening membrane may be scarcely affected, generally it is relaxed, or a state of passive congestion of a venous character gives it a dark, unhealthy look. These ulcerations may enlarge a good deal, and present the aspect and symptoms mentioned above. This is the follicular disease of Dr. Horace Green,[1] who has devoted a volume to its elucidation in the various positions it may occupy. Like other forms of ulceration, it attacks the several parts of the mucous membrane, and may take place in the course of other diseases, such as bronchitis, phthisis, &c.; it is then to be treated, as far as possible, as if these did not exist. Too often it is but a second proof of a depraved state of the system. It may last years, and sometimes is the undiscovered cause

[1] 'Diseases of Air Passages,' &c.

of symptoms called clergyman's sore throat—a term which would be better restricted to forms of nervous irritation originating in sedentary habits, combined with occasional over-exercise of the voice, but general disuse of it, and bearing some resemblance to the unaccountable vagaries of hysteria.

Chronic ulceration requires a course of treatment similar in principle to that of relaxed sore throat, but far more energetic. If there be much irritability, anodyne inhalation is to be the first measure, and this will often cure herpes. In follicular and other chronic forms, a stimulant will be needful. Nitrate of silver is perhaps the most constantly used, but sulphate of copper has its advocates. If the patient will not submit to the process of mopping, or if for any other reason it be undesirable for a time, fumigations of iodine, and occasionally of mercury, will be found very valuable, and in other cases a resort to them, between the use of caustic, will materially hasten the cure. But, important as is topical treatment, other indications must not be overlooked. It is true, the ulcers may be healed over by local appliances, and the sore throat called cured; but there will be great disposition to a return, and the patient is really little better for his cure. He may suffer less annoyance, he may fancy himself well; but he carries about a constitutional taint, which may on the slightest exposure renew all his symptoms, or put a period to his existence by inducing consumption or some allied disease.

Of course, the general treatment will vary with the prescriber's opinion of the constitution he has to deal with. A mistake here will frustrate all his intentions, and disappoint his hopes. Often, too, every form of

alterative or tonic he may think suitable will prove vain unless he prepare the system to receive them. Not only so, the patient will declare, and quite truthfully, that all his medicines "disagree;" mischief, rather than benefit, will accrue. Frequently have cases been brought to the author where the most judicious prescriptions have thus been rendered nugatory.

When ulceration is rapidly spreading, the treatment is to be proportionately active. Here anodynes are valuable at first, though occasionally not a moment is to be lost in bringing the most potent remedies into play. The specific forms are the most usual examples.

CHAPTER V.

APHTHOUS SORE THROAT—THRUSH.

The several forms of disease which have been grouped together under the general name "aphtha" bear an intimate relation to our subject, since they not only frequently involve the throat, but form the connecting link between some of its diseases. In children, the several kinds of stomatitis are the exact counterparts of forms of sore throat originating in inflammation. Stomatitis, being subject to ocular scrutiny, may be made serviceable in explaining the affections which are more out of sight. The simplest form of inflammation of the mucous membrane of the mouth is most common, and is called erythematous. Sometimes the inflammation is distinctly follicular. This form has been described in connection with the throat, so that follicular cynanche may be called aphthous sore throat. When a crypt has suppurated, it presents just the same round ulcer, with all its varieties in appearance; and the treatment will be conducted on the same principles, whether the disease be in the mouth or throat. Ulceration of the mouth is often not of a follicular kind; we see it involve considerable portions of the mucous membrane, both in children and adults. It is scarcely ever seen, however, in a good constitution. Gangrene may succeed any inflammation in the mouth, and is a very fatal disease. Care should be taken not

to confound with gangrene aphthæ on which blood has effused, and made them dark-coloured.

The most interesting form of thrush in relation to our subject is that in which there is a kind of membranaceous appearance. This begins as erythematous inflammation. When this process has gone on for a certain time, it presents an alteration of secretion of a membranous nature, and constitutes millet—a very near approach to the exudative inflammation of croup and diphtheria. The character of the species is, that on the diseased surface we see small white points, or patches when many coalesce, or in very severe cases a complete creamy deposit over the whole membrane. The patches come off in due time, and leave the part beneath inflamed. Professor Berg[1] has shown the constant existence of a cryptogamic vegetation in this deposit. Whether the parasite constituted the disease, or was merely developed in the exudation caused by inflammation, was long in dispute. The fact seems to be that, in some forms of aphtha, the secretion changes from its natural alkaline to an acid character; and this state, if not essential, greatly favours the production of the oidium albicans—a kind of fungus which grows very rapidly. It seems as if the whole membrane might be composed of the sporules, while in other cases a depraved secretion is mingled with it in large proportion, and in some a true inflammatory exudation. In all, the epithelial scales will be also seen.

It is to be observed, however, that muguet is truly infectious, as proved by M. Berg, who transplanted the sporules of the fungus to healthy mucous membrane, and thereby communicated the disease.

[1] 'Ueber die Schwämmchen der Kinder.'

It may be proper to precede any remark on the treatment of thrush by a caution against looking exclusively at the local manifestation of disease. The general health is almost always at fault. Spoon-fed children are the most frequent sufferers. Then the close of exhausting diseases is often marked by a form of thrush. Adults are always very cachectic, when they get it. It is safer, then, to regard thrush as a symptom than as a disease. This view will deter from one of the prevailing errors—over-treatment of a topical kind. It is positively dangerous to be too energetic with roughly applied irritants, and yet this is daily seen. Nurses, and mothers too, rub the tender and inflamed membrane of infancy with borax and honey; and rub it hard and frequently—a cruelty which few adults would suffer to be perpetrated on them; and all most unnecessarily, and for the most part mischievously. If stimulants are needed, there are many which are far better, and not so cruel. Moreover, the saccharine element favours the growth of the oidium albicans; and, therefore, this application is further improper in that form of the disease. In the simplest cases, washing the mouth with tepid water is the only topical application needed. In follicular stomatitis, a mild solution of nitrate of silver may be applied with a camel-hair brush. This is less irritating, and far more effectual than borax. Where the ulcers are spreading, escharotics must be used. In all forms of aphtha, chlorate of potass possesses peculiar power to restore healthy action, and is especially efficacious in muguet. We are greatly indebted to Dr. Hunt[1] for the introduction of this drug into practice.

[1] 'Medico-Chirurgical Transactions,' vol. xxvi.

A mucilaginous decoction, with some chloride of lime, is highly prized by M. Guersant,[1] who uses this remedy also in enemata in preference to lime-water, and topically instead of solutions of borax, or zinc, or alum.

In infants, careful management of the diet is all-powerful, and the local means must be the simplest—such as ablution; and it may be the solution of nitrate of silver, or sulphate of copper or iron. In adults, the constitution is so terribly deteriorated, that the whole array of tonics and alteratives will, in turn, be required, and some cases will tax the ingenuity of the prescriber to a great extent.

Sloughing ulcer and gangrene following aphthæ require the most energetic treatment, both local and general. With every attention, they prove very fatal.[2]

There is a form of gangrene of the mouth which appears to come on without any inflammation preceding it. It is more common in France than anywhere, and from French observers we derive the best descriptions of it. Isnard is very graphic.[3] Something like it is observed occasionally after the exanthemata. It is often accompanied by a very serious gastro-enteritis. In lieu of chemical caustics, M. Baron[4] makes a crucial incision on the external surface of the cheek, and through this opening applies a wire at a white heat.

[1] 'Dict. de Médecine,' Muguet.

[2] 'Billard, 'Traité des Maladies des Enfans.'

[3] 'Dissertation sur une affection gangréneuse particulière aux enfans.'

[4] "Mém. sur une affection gangréneuse de la bouche," 'Bulletin de la Faculté,' 1816.

CHAPTER VI.

INFLAMMATION WITH EXUDATION.

We have now arrived at the exudative form of sore throat. This has already been alluded to. In the mildest cases a few flakes form on the fauces, without giving rise to very serious consequences; but such instances are rare exceptions, and the presence of a single flake must be regarded as of gravest import, for this exudation is the characteristic of the two serious and fatal diseases treated of in this chapter. In croup, the exudation endangers life, both by inducing spasmodic closure of the glottis and by mechanically impeding the entrance of air into the lungs; the patient dies suffocated. In diphtheria it is associated with intense depression of the vital powers, such as we see in malignant fevers, and speaks plainly of blood-poisoning; the patient dies exhausted.

CROUP.

Croup is a disease of childhood. The name was first proposed by Home,[1] and has since been introduced into several languages, to indicate an acute inflammation of the trachea and larynx. Cullen called it cynanche trachealis. Other names are—angina stridula, cynanche suffocativus, &c. Bretonneau uses the ex-

[1] 'Treatise on Croup,' 1765.

pression, "diphthérite trachéale." The disease is not new, but several affections of the throat were evidently for a long time confounded with it. In England, the term croup is mostly restricted to an exudative inflammation in the trachea and larynx, accompanied by inflammatory fever. On the Continent it is often employed to designate any exudative disease; and we have used the word diphtheria just as broadly. The modern history of the disease is dated from the epidemic of 1805-7, to which the nephew of the first Napoleon fell a victim. The emperor then offered a prize for the best essay on it, to which incident we are indebted for many good works. The report[1] will amply repay perusal.

Croup mostly commences as a catarrh, but often so slight as to be overlooked until the more urgent symptoms excite alarm, and call to mind the cold the child had. Very commonly, the severity of the attack occurs in the night; and, throughout the disease, nocturnal exacerbations are liable to take place. Cough, and dyspnœa of a peculiar noisy character, are the main features. The inspiration is very difficult and loud—stridulous it has been called—and compared to the sound a fowl makes when caught hold of. At first the cough is dry, but soon a viscid expectoration is brought up, containing films, flakes, and sometimes complete casts of the tubes. The little patient appears in constant danger of strangulation. The expectoration will vary with the exudation. The voice, as well as cough and breath, is croupy, and this often shows the first departure from health, and gives an early warning of the impending danger. There is

[1] 'Rapport de la Commission sur les ouvrages envoyés au Concours sur le Croup.' Paris, 1812.

strong inflammatory fever. The false membrane is formed in the larynx and trachea, and sometimes all along the terminal bronchi. It varies greatly in thickness. The thickest part is usually at the entrance, where, according to Hasse,[1] it never exceeds three lines, diminishing in density as it descends. Patches are seen, now and then, in the throat, and may descend into the œsophagus. The affection seems almost always to travel downwards, and consequently the morbid appearances are most constant in the larynx, then in the trachea, and lastly in the bronchi. Dr. Porter,[2] indeed, seems to have met with cases that took a contrary direction; but both Hasse[3] and Rokitansky[4] support the view stated above. Climate and epidemic agencies influence the progress of croup greatly. In healthy country places it is mostly sthenic, and the exudation spreads over a larger surface, and is more dense, while in the asthenic form met with in large cities the opposite appearances are found. On detaching the false membrane, inflammation and its consequences are seen.

Sometimes inflammation, evidently of a croupy nature, produces a small amount of exudation, accompanied by considerable ulceration. The scanty exudation may be due to expectoration of the lymph, yet such an explanation seems insufficient, as aphthous ulcers in the mouth are frequently associated with this variety. Another set of cases have been distinguished as pseudo-membranous

[1] 'Anatomical Description of Diseases of the Organs of Circulation and Respiration.' (Sydenham Society's edition.)

[2] 'Surgical Pathology of Larynx and Trachea.'

[3] 'Anatomical Description of Diseases of the Organs of Circulation and Respiration.' (Sydenham Society's edition.)

[4] 'Pathological Anatomy.'

laryngitis, and the distinction is insisted on by Guersant,[1] as well as by Bouchut.[2] The symptoms are more like those of laryngitis, and the expectoration contains at most but a few shreds, and these are never renewed. In true croup, according to these observers, the membrane re-forms as soon as it is detached. Then Dr. Ware,[3] of Boston, separates from membranous croup a form in which no exudation occurs; but the symptoms are the same. In twenty-five years he met with 131 cases which he considered croup, but found membrane to exist in only twenty-two. These varieties of opinion present serious difficulties in diagnosis, but they illustrate our position, that the primary disease is inflammation of the mucous membrane, and that its results are determined by several circumstances; although exudation is most common in one position, ulceration in another, and suppuration in a third. In all these cases spasm of the glottis may offer as great an obstacle to the entrance of air as a great extent of exudation.

The complications of croup require skilful auscultation and percussion, and it is the duty of the physician to watch for the first indications. Bronchitis is in some stage almost sure to be present, and perhaps fewer escape pneumonia than is generally supposed. One sound, masked as it is to a great extent by another, will be liable to deceive all but well-educated ears. It scarcely enters into our programme to go into these details, but we may remark that much more exact knowledge than most men possess may be gained by

[1] 'Dict. de Médecine.'

[2] 'Traité Pratique des Maladies des Enfans Nouveaux-Nés, et des Enfans à la Mamelle.'

[3] 'Contributions to the History and Diagnosis of Croup.'

attentive listening, both in simple and complicated cases, provided the rationale of physical diagnosis be kept in view, and pathognomonic ideas cast away.

It is desirable in every case to form an accurate opinion on the patient's state, and the natural difficulties of the physician are often increased by his only being called in at a late stage, and then obtaining but an imperfect history. He must first satisfy himself that the impediment to respiration is situated in the larger air-tubes, and that any accompanying states are complications, although these greatly influence his prognosis and treatment. The next step is to ascertain the presence or absence of false membrane. If exudative inflammation be once proved to exist, this fact ought not to be lost sight of for a moment. True croup comes on more gradually than the spurious form; it continues to get worse, in spite of manifest *remissions*. False croup comes on very suddenly, soon reaches its height, and is characterised by perfect intermissions. This cannot take place in the more serious affection. The presence of fever will not be overlooked in a diagnostic view.

TREATMENT OF CROUP.

In respect of treatment, two points demand constant remembrance. First, the sudden onset and rapid progress point out that no time is to be frittered away. Second, the naturally remittent nature of the disease must not lead the attendant into the error of relaxing his vigilance, and encouraging the ill-founded joy of anxious parents, soon to be plunged into bitter disappointment; nor into the equally dangerous fallacy of

repeating remedies which appeared to arrest a former paroxysm. Perhaps it is forgetfulness of such points which has made all specific directions for the treatment of this disease bad in themselves, mere treatment by rule only hastening the catastrophe. For this reason, too much detail will be avoided here.

The first remedy usually recommended by writers is the lancet. Students are told to open the jugular veins of infants without delay. It is not surprising that such a measure should sometimes arrest a paroxysm, or rather hasten its conclusion. But it soon returns, and, remembering the injunction to repeat the bleeding when needful, the lancet is again resorted to, till the practitioner learns, by a sad experience, that venesection is no specific for the disease. No wonder infants sink under repeated bleedings. Another student goes into the world with the same doctrine, but has its severity curbed by a less bold disposition, or a recollection that eminent men have denied the utility of bloodletting. On return of a paroxysm, therefore, he employs leeches in lieu of repeating his operation, and that with a result far more disastrous, for the local loss of blood produces a slower effect—certainly the last thing to be desired in severe croup—without materially diminishing the weakness induced. The consequence is the child is as surely exhausted; but this process being less sudden, is not attributed to the remedy, and so the practitioner closes his eyes to the share his bleedings have in causing or hastening death, and goes on in the same fatal routine. And while these scenes are being duly enacted according to the precepts of the colleges, what are the professors who thus teach doing? Is it not a fact that they do not in practice act on their

theories? Far be it from the author to say that bloodletting is always wrong. He knows the testimony on which it rests, and would not hesitate in certain circumstances to give his patients the benefit of a remedy the efficacy of which is attested by the best men of the last few generations. He knows, too, the difference of town and country practice, having seen both in large spheres. But he lifts up a voice of warning against the system of teaching which too largely prevails, and which sends forth young men armed with a treatment ready made for a disease as soon as its name is found. There are, of course, exceptions; there are, too, excuses, for our educational system has its defects; indeed, its present utility is, for the most part, due to the unwearied efforts of able tutors to make the best of it. These men will not sneer at such a position as that laid down, and it is hoped few will pronounce as presumptuous such a protest in a brochure professing to be made up of suggestive observations for the medical practitioner. The author has been a student in his time, and has since instructed pupils by the bedside, and he believes that the contrariety between the lecture-room and the wards of the same physician, is a stumbling-block which ought to be removed by prelections of a different kind in the former, and by continual clinical observations in the latter, of a more desultory, but at the same time more practical, character.

The next most common remedy is antimony. All emetics are useful in turn. Where it can be borne, the effect of antimony is more decisive than ipecacuanha or squills. Given only in nauseating doses, it is more permanently debilitating, and yet much less effectual, than

when it causes vomiting. A good deal of false membrane is often brought away by this act, which seems also to be otherwise beneficial. It may be excited every two, three, four, or six hours.

If antimony be decided not suitable, or, as will now and then happen, if it will not excite vomiting, other emetics may be tried. Where there is want of tone, sulphate of zinc is very valuable, and may be combined with ipecacuanha, or given alone. Sometimes it may be even advisable to give emetics containing stimulants. Sulphate of copper is useful in these cases, and its small bulk renders it easy of exhibition. I have employed mustard occasionally, as well as ammonia in strong decoction of senega. Alum is very much relied on by Dr. Meigs.[1] An emetic always at hand, and generally effectual, is common salt. I am not aware that any one else has employed it, but some trials I have made lead me to consider it a valuable medicine. It has an undoubted chemical effect on the exudation, so that it will be likely to detach any membrane located in its passage to the stomach. It may, too, be absorbed, and exercise some effect through the blood. At all events, it will never do harm. A little mustard added to it combines a saline and stimulant emetic of great use.

It is usual to exhibit mercury between the doses of antimony. Those who follow this plan will do well to suspend it during the exacerbations, and give the emetic which is most indicated; or they can use the mercurial ointment. Counter-irritation has provoked much difference of opinion. The practitioner will bear in mind that children are tender, and will not wish to dis-

[1] 'Diseases of Children.'

tress them when he can help it. A blister, cataplasm, or iodine paint, may alternately prove serviceable.

Tracheotomy is still a moot point. It is not to be denied that an artificial opening into the air-passages will prolong life in cases of obstruction to the free entrance of air above such opening; nor that in many cases of croup such obstruction is the immediate cause of death. So far as this point is concerned, it does not even matter that the aperture is not constantly closed by lymph, for spasm frequently completes this closure. By tracheotomy provision is made for the admission of air *where the effusion does not go too low down*, but, alas! this too frequently happens. In France they open the trachea at an early stage, but with us the operation has been looked upon as the last resort, and so often postponed till death had too evident a hold on his victim. Both extremes are to be avoided. If an opening is to be made at all, let it be early enough; at the same time many will think that cases thus cured might have been tractable under ordinary measures. In private practice several causes will combine to delay it longer than is advisable.

Although suggested by Home in 1765, this operation was first performed by John André, in London, in 1782, at least this is the earliest case that remains on record. In 1818, M. Bretonneau performed it, but his patient died. In 1824, he tried it again, with the same result. In 1825, notwithstanding his previous failures, he once more resorted to it, and this time success crowned his efforts. Since then nearly 200 patients have been subjected to the operation, of whom about a fourth have recovered.

But are there no less terrible means at our com-

mand than the inflictions hitherto discussed? Without for a moment wishing to lessen the promptitude with which the disease is met, we venture to say, yes. Already salt and mustard emetics have been alluded to. A saline and a stimulant, simple, always at hand, and mostly efficacious in inducing vomiting with its detachment of exudation and other good effects. But for a more thorough removal of the obstacle, we have yet to consider the subject of wiping it off, and applying medicaments to the inflamed membrane beneath. This is the effect of Dr. Horace Green's[1] treatment. That a sponge has been passed into the larynx is pretty well proved. That it requires a skilful operator no one doubts. The success of the practice justifies its getting a further trial. It must be more effectual than a syringe, since this has no power of mechanically removing the exudation. At the same time, the utmost gentleness is to be used, or more harm than good might be done.

If, as some still maintain, the probang has not been applied to the interior of the larynx, the good effect of the remedy has extended along the membrane in a manner more remarkable than the spread of disease by continuity of structure. Dr. Green's cases are referred to in proof of this.

But the remedy which above all others no one can find a fault with, provided it cure, was proposed by Dr. Lehman, of Torgan, and its efficacy was relied upon by the late lamented Graves, of Dublin.[2] It consists merely in the application of hot water by

[1] 'On Croup;' and 'On the Air-Passages.'

[2] 'Clinical Lectures,' vol. ii; and 'Dublin Medical Journal,' vol. viii.

means of a sponge, squeezed half dry, and held close to the skin covering the larynx and trachea. As it cools, it is to be changed for another in readiness. In ten or twenty minutes great redness exists, perspiration occurs, and relief of cough and breathing. Dr. Graves considered he saved several patients by this method, but that it is only applicable to cases seen at the onset. Nor did he propose to give up other remedies. I go a step further, and apply the hot water to the inside of the larynx. Inhalations have already been spoken of in throat disease. It is obvious that their application in the usual way would be a matter of considerable difficulty in children. Moreover, in such a disease as croup, the inspiration is so impeded as of itself to constitute an objection both to the sponge and the inhaler. It has appeared to me, however, that if the little patient could be kept in a uniform warm and moist atmosphere great benefit must accrue. For this purpose the temperature must be kept much higher than is usual in any sick-room. Moisture, too, when employed, must be in proportion. It may, indeed, be found that hot air alone is most effectual, or in some cases impregnated with steam, in others not. The powerful effects of the Turkish baths are familiar enough. Of course it will be difficult to carry out the plan—in the cottages of the poor impossible. It is a source of regret that I have been unable at present to get the full benefit of an extensive trial, but I hope to be able to accomplish this. Meantime I throw out the hint to the profession, as some members of it have abundant opportunities of carrying it out well. It seems reasonable to expect relief; and the sponge to the throat, topical application to the membrane, and

indeed all the other remedies which have been recommended, may be used at the same time.

There is nothing new in the principle of this treatment. For a long time it has been customary to keep the room warm, and even to add some moisture, by means of a kettle kept on the fire, with a long tube attached to its spout to conduct the steam into the apartment. But such a course is insufficient. What I recommend is, that the heat and moisture be increased to a much greater extent than occurs in this way. To get the effect of the vapour on the exudation, the air is to be saturated. To produce an effect on the skin, the temperature must be greatly increased.

FALSE CROUP.

Before passing on to our next subject a few words must be premised on false croup, crowing inspiration, or laryngismus stridulus, as it has been called, since serious errors in diagnosis, tending to improper practice, have been made. A little care will distinguish the two affections. False croup is essentially a spasmodic ailment, whatever may be the exciting cause of the spasms. Consequently it is not accompanied by sympathetic fever, and when the paroxysm has past the respiration is free.

It is not half so important to distinguish the varieties of croup, as to separate them all from the purely nervous disease. Croupal symptoms in laryngitis, in tracheitis, in laryngo-tracheitis, and the pseudo-membranous laryngitis of M. Guersant, may be looked upon as one disease. It is well indeed to know, not only the existence, but the extent of exudation; but it is far

more important not to confound a truly inflammatory with a mere nervous affection.

In the latter the temporary obstruction to the inspiration may be greater than in true croup; the cry, when the air enters, louder; but it does not exactly counterfeit the stridulous inspiration of the narrowed tube. This cry, however, of itself is not sufficient to discriminate a case, for in true croup the passage may be only slightly diminished. There are usually convulsive symptoms in the false variety; indeed it seems allied to the hydrocephaloid disease, and its origin is similar. It is perfectly intermittent; the paroxysm mostly occurs at night. Attention must be directed to gastropoietic derangement. In the paroxysm the warm bath will often give relief. Although many look upon the convulsive symptoms as a necessary part of the disease, Dr. Ley[1] strenuously opposes the theory, and declares they are "purely accidental, and not to be found in a simple majority" of cases. He attributes the symptoms to a partial or complete paralysis of the muscles which open the glottis, leaving those which close it unopposed. This paralysis, he considers, is caused by the pressure of enlarged glands on the recurrent nerves.

Dr. Marshall Hall,[2] on the contrary, maintains the cerebral origin of the disease, on the ground that pressure would produce simple continued paralysis, coming on gradually, rather than an intermittent spasm; that this laryngismus is often accompanied by strabismus or some other convulsive affection; and that enlarged glands would be less curable and seldom suddenly fatal. I cannot but think that both these eminent authorities

[1] 'A Treatise on Laryngismus Stridulus.'

[2] 'Lectures on the Nervous System.'

are in some degree right. In the majority of cases carpo-pedal contractions or other convulsive symptoms are present, and these are cured by attention to the exciting cause, while, on the other hand, Dr. Ley evidently met with numerous instances where enlarged glands become such exciting cause.

One remove further from croup—in appearance—we get a number of cases difficult to generalise, excepting so far as that they are instances of ailments in children in which spasm of some part of the respiratory apparatus is the prominent symptom. One case will resemble the more distinct affection, another borders on hooping-cough, a third, to some extent, simulates consumption, while a fourth appears asthmatic. In all these the disease is one, and of a spasmodic kind. Its origin is not to be traced without care, and sometimes this baffles the most patient. Improper food, disorders of the alimentary canal, the irritation of worms, are everyday causes. It may be a part of some other convulsive disease. It may be due to enlarged glands, to phthisis, or to any irritant to the nerves. A form caused by enlarged thymus, and called thymic asthma—very rare—has attracted attention. I believe I was once successful in diagnosing this. No general directions for the management of these cases could be compressed into our space. They afford an opportunity for the display of judgment and discrimination in diagnosis and treatment. It may not be deemed altogether inappropriate here to remind the reader how nearly these spasmodic affections of children are allied to some forms of nervousness and hysteria in adults, mostly in the female. They evidently all belong to one category.

DIPHTHERIA.

Diphtheria attacks adults as well as children. In this complaint the exudation occupies the fauces, and is consequently within the range of vision. It may extend down the air-passages, constituting croupal diphtheria. It is accompanied by intense depression. The fever is of the lowest type. Death occurs by asthenia, the patient scarcely ever being asphyxiated, as is so common in croup. Some of the most distressing circumstances of that disease are therefore absent. A very mild form of exudative angina has already been noticed. It is most frequently seen during epidemics of the more formidable species. Perhaps its mildness is due to the vital power being able in some constitutions to throw off the morbific element. The appearance of the exudation in diphtheria has no distinctive characteristic. It is the same as that of croup and the exanthemata. As a rule, no fungus can be discovered in it. It seems to be formed by the coagulation of the serum which is effused in the first stage. It is generally less solid than that of croup. Indeed, all exudations appear to be firmer in proportion as the inflammation is of a sthenic kind. The least dense are those of the lowest epidemics of diphtheria. In these, large quantities of serous fluid, and even of blood, are often poured out. The exudation is thereby disintegrated, and decomposition soon takes place. Flakes are abundantly discharged, of a most intolerable odour. The glands of the neck early enlarge, and abscess often takes place in their neighbourhood. These traits sug-

gest that diphtheria must be, to a great extent, a blood-disease. No mere local affection gives rise to such symptoms. They are the consequence of some profound lesion of the constitution, which in the present state of pathology is referred to blood-poisoning. After a few days, if still adherent, the membrane curls up, and becomes detached. The surface from which the exudation has taken place presents the appearances of inflammation. It is fiery red or dusky livid. An erosion or two may be discerned, but breach of surface is the exception.

It has already been stated that exudative inflammation may occupy any part of the mucous membrane. It is most common in the respiratory tract. In the throat it is very formidable, and most frequently puts on its worst forms. On the pituitary membrane it is nasal diphtheria—the Egyptian disease—and often comes on in a most insidious way. M. Bretonneau[1] has graphically described its features. A similar exudation may also occur on the skin, constituting cutaneous diphtheria; here, though not so immediately dangerous as it is on mucous membrane, it may become the source of infection to the latter.

Many writers have used the word diphtheria generally to signify any exudation. It is advisable to be particular in our phraseology on a subject like this. Continental physicians seem to have employed the word croup quite as broadly. In England we draw a great distinction between croup and diphtheria. The line of demarcation is in this country undoubtedly more clear, yet it is very closely approached on each side, and there can

[1] Fifth Memoir, vol. iii, of the New Sydenham Society.

be no doubt that much of our classification has been erroneous.

Diphtheria with us very often resolves itself into the croupal form, while our croup seems of late years to put on some of the characters of diphtheria. Our croup is tracheal and laryngeal exudative inflammation, comparatively of a sthenic kind. Croupal diphtheria is faucial and laryngeal, and almost always asthenic. Yet these distinctions are by no means absolute.

Bretonneau maintains, with much learning, that all epidemics of putrid or gangrenous sore throat have merely been diphtheria. This opinion, plausible as it is, has not passed unchallenged; that it is partially correct no one can deny. Before the able physician of Tours investigated the subject, and assigned to diphtheria a proper place in pathology, its nature was not understood, and the cases which occurred, epidemically or sporadically, were confounded with other forms of disease. But are we therefore to deny that any such thing as gangrenous sore throat has existed? The descriptions of able observers lead to an opposite conclusion.

The contagious nature of diphtheria has been rather keenly disputed. All epidemics present difficulties in investigating this property. That exudative inflammation is necessarily contagious I cannot admit, but that this special form of it may sometimes thus be propagated is not altogether improbable. Bretonneau strongly asserts that it has this property. His opportunities for investigation have been large, his diligent employment of them beyond all praise, and the array of facts he has adduced is very formidable. Yet he himself declares its contagiousness far less ener-

getic than that of other diseases. It has failed to spread by inoculation on the one hand, but on the other it has more than once appeared to do so by an accidental inoculation of the diphtherial product. More than one French physician has fallen a victim to such an occurrence during the performance of tracheotomy. Perhaps at present we are only entitled to conclude that it is capable of being transmitted by direct implantation of the exudation, and that in rare cases the constitutional disease may also be propagated by contagion, as may putrid fevers. We ought not to encourage useless exposure in a case of doubt, neither ought we to add to the horrors of so fearful a disease by investing it with imaginary sources of dread. If contagious at all, it can be only so to a small degree in bad cases, and in milder ones probably never spreads in this way. It is truly an epidemic, and to epidemic influences must we look to explain its rise and decline. So far as preventive precautions go, we are therefore reduced to the avoidance of any accidental inoculation, and to the observance of proper hygienic measures. Let all exposed to an epidemic be in the most vigorous health, and it will not spread.

The nature of the disease being kept in mind, we shall not confine our attention to either local or constitutional treatment, but avail ourselves of both. All depressing remedies are to be avoided, and the treatment had better partake of a stimulant character as soon as the least indication appears. On this principle, emetics of sulphate of copper, mustard, or ammonia with senega, will be selected in preference to others. Where a decided stimulant does not seem so imperative, salt is of great value. It

decomposes the exudation, and, as before stated, exercises a purifying influence on the blood. It has all the benefits of saline remedies, and may be used while support and tonics are given in the intervals. Chlorate of potash may be tried by those who have faith in it, but other drugs are more to be relied on. The main indication for constitutional treatment is to keep up the patient's strength. This is to be attempted by nourishment in every form that ingenuity can devise—by wine, quinine, bark, and all the other means used in equally dangerous diseases. Detailed instructions for conducting the case will not be expected here, especially as our literature already teems with suggestions.

Much good may be effected by local measures. Nitrate of silver has been successful with not a few, but stronger caustics will be needed; and of these the mineral acids are in most repute. Bretonneau has derived excellent results from undiluted muriatic acid. As an application incapable of doing the mischief of these, but probably quite as efficient, I can recommend a strong solution of salt,—brine. I have not tried it in sufficiently numerous cases to make a full comparison.

It is in croupal diphtheria, where the larynx and trachea are implicated, that the propriety of tracheotomy is most likely to be mooted. We should not forget that the success of such an operation must greatly depend on our opening being below the seat of the exudation, and yet it has undoubtedly saved life where this was not the case. No one would open the air-tube unless the impediment to inspiration seemed likely to be fatal. It can have no power to prevent death by asthenia.

As a sequel of measles, the croupal form is not unfrequently met with, and in this country we see it more often than any.

Suppose the patient to recover the immediate attack, he is no more out of danger than a convalescent from scarlatina. Similar sequelæ are very liable to occur.

Dropsy is quite as often met with.

Albuminuria is present from the first in about one third of the cases.

The glandular affection of the neck will call for unremitting attention, and serious injury of the cervical nerves, and also of the cervical portion of the cord, is by no means unlikely to occur.

Some form of paralysis is not uncommon. I have thought this may be produced by the profound injury to the whole nervous system—the effect of the poison seeming to suspend all its energy.

To some such cause, acting more energetically, may probably be referred those cases of sudden death which sometimes take place in the course of diphtheria. This sad termination of the disease also vividly suggests a comparison with the same awful event occurring, as it now and then does, after accouchement. Probably in some instances the causes of death may be precisely the same.

In conclusion, physicians must watch their patients with keen anxiety, and only permit a gradual return to ordinary regimen. They must not be taken by surprise at a rapid succession of changes, nor must they suffer the early stage to pass without decisive measures being adopted. In such formidable diseases skill avails but little unless aided by prudence. Art is often obliged to palliate suffering which might have been altogether

prevented, but sympathy is at all times a poor substitute for relief, and nothing can be more painful than to be called upon, when too late, to administer to a case which, at an early stage, might have been arrested. Yet even in the worst cases hope is not to be too soon abandoned, for, when least expected, nature does sometimes exhibit her manifold resources, and the sinking craft occasionally outrides the storm, and at last gains the shore, to the amazement of those who were watching for the moment when she would inevitably go down.

CHAPTER VII.

THE PHARYNX.

Inflammation—Abscess—Ulceration—Follicular Disease—Tumours—Cancer.

Proceeding with our plan, we now pass on to consider the organs which compose the throat, leaving the remaining consequences of inflammation of mucous membrane to take their places as we proceed. We shall not have to repeat a number of observations which have been made in reference to any part of the membrane. The musculo-membranous bag, which is called the pharynx, is placed behind the larynx, nose, and mouth, and in front of the spinal column. On each side run the great vessels of the neck. It is said to reach from the basilar process of the occipital bone to the fifth cervical vertebra, ending in the œsophagus just behind the cricoid cartilage. It is thus about four inches and a half long. Its walls are made of mucous membrane, outside this a fascia, very tough above, but less dense as it descends, and outside the fascia the constrictor muscles, whose office it is to force downwards the food, which the act of swallowing places in their power. The mucous membrane varies in thickness. At its junction with the Eustachian tubes and nares it is very fine. Here its glands are most numerous. A mass of these bodies runs along the

back of the fauces, from one Eustachian tube to the other, and here, therefore, we should look for disease. Yet there are many other follicular and racemose glands —some quite out of sight. Above the nares the epithelium is furnished with cilia, but lower down they disappear, and it assumes the squamous form.

Pharyngitis is not common, if the term be restricted, as it ought to be, to an inflammatory affection of the pharyngeal lining membrane. Inflamed sore throat has been already described, and is to be distinguished. In the more localised affection, painful swallowing will generally be a prominent symptom; the nose and Eustachian tubes may one or both be implicated, giving rise to deafness, tinnitus, coryza, a nasal voice, &c. The affection may be acute or chronic, and terminate in any of the modes described when speaking of a more diffused inflammation. When at the back or upper part of the pharynx, inhalation will often fail, as will gargles. Topical treatment, to be effectual, must be skilfully applied, either by a brush, a probang, or the elastic bottle. It is to be noticed, that constitutional treatment is of most consequence where fever runs high.

Sometimes poisonous or irritating liquids swallowed are the cause of sore throat, and occasionally the pharynx seems almost the only part affected. Traces of the poison are often visible. The subject has been alluded to in a previous chapter. Fishbones, and other substances, arrested in their passage to the stomach, often give rise to traumatic pharyngitis. They must be removed by the appropriate measures, and the injury remaining treated on general principles. Some difficulty may be experienced in deciding whether the foreign body remain in the pharynx, or only the pain

caused by the injury it has done give rise to a sensation as if it were still present. The laryngoscope may discover the substance or the injury. This is one of the few cases in which my magnifying reflectors will be found superior to the plain mirror.

Behind the pharynx is a quantity of loose areolar tissue, connecting its walls with the prevertebral fascia. This is sometimes the seat of abscess, giving rise to some anomalous pharyngeal symptoms. It may occur in all ages, and many patients have died with it undetected—some even when it has been suspected. The symptoms are at first mostly those of pharyngitis, afterwards of suppuration. Where this sequence is observed, and the shivering is marked, most careful search should be made. Sight will not aid much. The finger must be passed as far as possible; and if nothing can be made out with it, the probang is to be carefully employed to detect the swelling. If found, and accessible, there only remains for it to be opened, which, with great care, may usually be safely done. It occasionally bursts, and discharges its contents before it is discovered. If suspected, but incapable of being found, an emetic might possibly burst it. This abscess often originates in an erysipelatous inflammation. At other times it is a symptom of disease of the vertebræ. In either case, the pus has mostly an offensive odour.

Ulceration, simple, follicular, and specific, is common enough in the pharynx, and is sometimes confined to it. It does not differ in any respect from the same lesion in other situations. A predominance of pharyngeal symptoms is noticed by an attentive observer. The subject is referred to here, for the sake of observing that exceedingly obstinate sore throat, with most

annoying hawking, often depends on ulceration of this organ, which has remained undiscovered—it may be low down or high up. In either position, it will elude the inspection of any one satisfied with merely looking in the throat. My tongue-depressor, speculum, and mirrors, have served me good turns here, making cases curable in my hands which had resisted others for long periods. As these and the laryngoscope become more used, this observation will be valued. Happily, the detection of such cases is a sure prelude to cure.

Polypi and other tumours may occupy this part, but they usually either descend from the nares, or have a malignant origin. True simple pharyngeal polypus is exceedingly rare. Extirpation has been successful in the hands of M. Jobert de Lamballe,[1] Roeser, and others.[2]

Cancer mostly begins in the pharynx, and always involves it. A chapter on this painful subject will be found further on.

[1] 'Gazette des Hôpitaux,' 1858.

[2] Schmidt, 'Jahrbücher,' 1859.

CHAPTER VIII.

THE UVULA.

Œdema—Elongation—Enlargement—Excision.

Between the mouth and pharynx hangs a sort of curtain—the velum pendulum palati, or soft palate. It is not long enough, however, to form a complete separation; it is moveable, and rather irritable. Its middle portion is the longest, tapering down into a long, red point, called the uvula. From this pass down two folds on each side—the anterior and posterior arches of the fauces. Snugly ensconced between these two arches lie the tonsils. The uvula, and indeed the whole soft palate, is abundantly supplied with follicles. The velum is made up of muscles covered by mucous membrane. From its structure and function the uvula is liable to disease. I have seen inflammation of it without involving anything else—uvulitis. This is not often observed, since the affection is trivial. The results of active or passive inflammation do, however, trouble the medical man. Of these œdema is an example, a common one, a troublesome one, one easily relieved, but very often not detected for some little time. The swollen and flabby state consequent on œdema requires no description. The symptoms will correspond with the increase of size and the irritability of the parts. The fluid must be let out by a puncture or incision, an

operation of a simple nature, but requiring an expert hand to do it well. Elongation is the term usually applied to the chronic relaxed uvula. Astringent gargles may be tried, but it will often be necessary to resort to the knife. Complete excision is attended with no evil consequence, and is strongly advocated by Mr. Yearsley,[1] in opposition to a partial removal. Other authors, however, still recommend snipping. This is easily done by Weis's uvula scissors; but there certainly is a good deal in Mr. Yearsley's objection, that the excised surface does not look backwards, as when a tenaculum and bistoury are employed.

Enlargement of the uvula implies increase in all directions, it often taking place by deposit of fibrous matter. I have seen the uvula hypertrophied to such an extent, that it was as large as a man's finger or thumb. In these cases, nothing less than total excision in the way of operation will succeed.

It is important to recognise the liability of the uvula to these conditions, in order to prevent errors. Practitioners who never inspect the throat except it be complained of, are, it is to be feared, as numerous as those who derive little information from the stethoscope. They must be as liable to fall into most provoking mistakes. Here they will be lulling fear in the midst of danger; there exciting alarm without due cause, and in both instances losing reputation. The uvula-cough, as it has been called, is, indeed peculiar, and may often be recognised by its quick and ineffectual hack; yet not always. It is for the most part worst at night, or when the patient lies on his back. Often he is woke up suddenly with a sensation of being choked, even when he

[1] 'Deafness Practically Illustrated.'

takes a nap on the sofa. Catarrh, relaxation, dyspepsia, want of tone, &c., are sure to aggravate the symptoms. The peculiarly troublesome cough sometimes gives rise to pains in the chest; and in long-standing cases, many of the symptoms of consumption may be assumed.

Dr. Stokes[1] declares he has seen all the symptoms of phthisis, except physical signs, thus produced. Further; neglected conditions of this kind may even rouse up to activity pulmonary disease, which had otherwise long lain latent. This is the less to be wondered at, inasmuch as a strumous diathesis is a most powerful predisposing cause of diseased uvula; an observation which will be of value in deciding on constitutional treatment.

Ulceration of the soft palate is usually but part of a more extensive disease, and has had already a full share of attention.

Congenital malformations requiring surgical operations for their removal, scarcely come within the province of this brochure.

[1] 'Diagnosis and Treatment of Diseases of the Chest.'

CHAPTER IX.

THE TONSILS.

Inflammation—Abscess—Ulceration—Hypertrophy.

These little bodies may be readily seen, on looking into the throat, embedded between the palatine arches as already described. Their size varies a good deal in different persons, but they seldom exceed half an inch either in length or width. They are well furnished with blood-vessels and nerves. A rough sketch of their structure has previously been given.

When inflammation attacks or spreads to them, the symptoms are pretty well marked. When these bodies are more affected than the other parts of the throat, they give their name to the attack—cynanche tonsillaris, tonsillitis, amygdalitis. The word quinsy is so closely associated with the idea of suppuration, both by the public and a large part of the profession, that it is well to confine it to real abscess of the tonsils. The suppuration, however, is but the consequence of acute inflammation. The pain and swelling of acute tonsillitis are great. No solids can be swallowed; often scarcely any fluid. Yet the desire to swallow is most tormenting. There is usually smart pyrexia, and the headache is marked. It often sets in with very severe rigor, and as it forms the essential part of scarlatina and other serious ailments, is no slight cause of anxiety to a con-

scientious medical man. It may be, therefore, worth while to remark here that simple inflammation is rather rare in childhood, but common in adults; while exanthematous cynanche observes an opposite rule. At puberty the catarrhal form is both common and severe. In the female I have associated it with the active development of the reproductive organs.

The treatment of tonsillitis is the antiphlogistic diet and regimen. As to the former, the unhappy sufferer has no alternative but a very low diet; often he is compelled to starve, and that when he has a terrible appetite. Of course the utmost care must be taken to avoid cold currents of air, or anything likely to aggravate the attack. Bleeding is not needful. Leeches are constantly ordered with a success which satisfies many. The author does not recommend them. Scarification is the most effectual mode of treatment. It empties the engorged organs of blood which is doing harm—and only harm. It diminishes the tenseness, and so soothes the pain. It seems, when adopted in time, to arrest the disease in many cases, and render it milder in the remainder. If resorted to oftener, we should not have such sad consequences of the ravages of tonsillitis to deal with. In case of suppuration, the abscess should be opened before too much mischief is done, or too much suffering needlessly endured. Fomentations are suited to the early stage of quinsy.

Purgatives, diaphoretics, febrifuges, and counter-irritation will, in turn, enter the phalanx of most practitioners. The only remark the author would make is to beg his readers not to punish their patients by too much treatment. The most soothing remedies are inhalations and fomentations.

M. Velpeau eulogised the application of powdered alum with the finger, and considered it capable of arresting tonsillitis. It is not used much now, not having answered the expectations of many.

Aconite has proved the best drug in the author's practice. It is safe, pleasant, efficacious, and allays the fever at the same time. It can be given when other medicines are a great cruelty.

An opening into the trachea has been recommended when suffocation seems imminent. I have not seen it needful; nor with scarification, inhalation, and aconite to use, do I expect to do so.

Chronic tonsillitis often succeeds the acute form. In infancy it frequently takes place without the previous acute attack. Its causes, symptoms, and treatment naturally partake of those of the acute, but in a modified form. Scarification will be useful as well as the other means. The constitution is, however, generally much at fault. Dyspeptic ailments must be rectified, and where struma is prominent, as it so often is, iodide of iron will be found most valuable, or cod-liver oil.

Ulceration, both common and specific, is very destructive to the tonsils, and has been noticed in connection with other parts.

Hypertrophy, enlargement, induration, are terms applied to a state generally the result of long-continued inflammation. It sometimes, however, takes place without this process. The ailment then goes on so slowly that when at length it is discovered, it has made great progress. This is most common with children. A peculiar snore during sleep, a thickness of the voice, some difficulty in swallowing at length attract attention.

Deafness in some degree is common. This has been considered the effect of obstruction of the Eustachian tubes. Perhaps congestion of their lining, induced by the pressure, is as active a cause. All the symptoms are aggravated by catarrh. The cough is of a teasing kind. The consequences of considerable enlargement of the tonsils are not always so slight as these. The constant impediment at length betrays itself by impressing a peculiar physiognomy on the little patient. The palate and dental arches are developed unequally. The nostrils become small and pinched, and give the appearance seen when respiration is impeded. Such is, indeed, the case; for although the breathing may be for the most part calm, yet it is usually accelerated, and spasmodic dyspnœa often occurs. Laryngotomy has even been performed to save suffocation in one of these fits. We think then that, obscure as the complaint sometimes is, and trivial as many may deem it, it is by no means undeserving our attention. There are many men who play too much with this condition. It is quite true that a strumous child with enlarged tonsils may acquire a more vigorous habit, and lose his ailment, especially when he can get sea air and bathing, with good diet; but this is no excuse for telling mothers that their children will outgrow a disease, the existence of which is a proof that they have a constitution liable to sink under the process of growth, rather than to spring up into unusual health. Hypertrophy of the tonsils should in every case lead the practitioner to suspect a strong strumous tendency, and while the child is growing up is the time to employ judicious means for the establishment of the strength. We are also to remember that acute tonsillitis is more liable to occur when any en-

largement exists, and that then the consequences are so much more serious. Other diseases occurring at such a time are increased in fatality; scarlatina especially. It is therefore a vital error, or unpardonable carelessness, to induce parents to look upon such a state as of no consequence. And yet we have not stated all the evil enlarged tonsils may do. Not only does this complaint closely simulate consumption; probably it often arouses that dire disease into activity. Such a fear will not seem exaggerated, when it is remembered that they have been pretty clearly shown to be one cause of pigeon-breast. On this point Mr. Shaw has given most conclusive evidence.[1] The impediment to respiration preventing the lungs from filling with each breath, the external pressure of the atmosphere causes the walls to yield where the resistance is least, and thus produces the pigeon-breast. Such is Mr. Shaw's explanation. The fact that the two conditions were frequently associated had long been known.

With these circumstances in view, few can object to the operation for extirpating hypertrophied tonsils. Yet we are not to rush to the other extreme, and declare all enlarged tonsils fit for removal by the knife. Again do we repeat, the constitution is at fault, and constitutional treatment is the *sine quâ non* of beneficial practice. The patient must be got into good health, and then if the effect of a clearly morbid growth is obviously injurious, excision is to be resorted to. Much has been written in favour of and against this operation. It has been tried extensively as a cure for deafness—with what success authors differ, and that point does not come within the scope of these pages.

[1] 'Medical Gazette,' October, 1841.

Mr. Harvey[1] opposes it for several reasons, one of which is that the tonsils are not merely secreting organs, but exercise important sympathies in the economy. My own observations on this subject certainly bear him out. Another reason he assigns is, that the mucous membrane is extensively affected. This also fully coincides with the views expressed in this volume, and corroborates the propriety of not treating a mere symptom. I apprehend, however, that Mr. Harvey would concede the necessity of the operation in such cases as those in which I have recommended it above, on the same grounds that other more important members are removed where their disease acts injuriously on the patient. A medium course will be found, on the whole, pretty safe. Much depends on age, sex, diathesis. If the health be greatly improved, small enlargement will thereby be cured. More direct treatment, especially repeated scarification, will often remove very formidable hypertrophy. In other cases it is, I believe, necessary and advisable to take away the growth. When this is done, it is to be remembered that one symptom of the constitutional derangement is henceforth unobservable, and a closer watch is therefore to be kept on others.

For removing the tonsils, a pair of curved forceps with tenaculum points, and a strong, short-bladed, probe-pointed bistoury, with a slighter curve than usual, are all the instruments required. The operator ought to be ambidexter. The condemned tonsil is drawn forwards and inwards, and so much as may be wished is easily sliced off. The cutting edge of the knife is to be turned away from the carotid artery. It is by no means

[1] 'The Ear in Health and Disease.' London, 1856.

advisable to take away the whole tonsil. About as much should be left as the healthy size of the organ.

SYMPATHY BETWEEN THE TONSILS AND OVARIES.

The effect of disease of the tonsils on the general health has already been noticed, but a word or two more may be said on the sympathy of these bodies. Some time since I laid before the profession[1] the history of a case in which there appeared a strong sympathy manifest between the tonsils and the ovaries; stating that case to be one of several under observation. Since then, Dr. Gray has published a case[2] in point, and I have had a considerable number illustrating the fact.[3] Some practitioners have declared that the cases must be mere coincidences. In my original paper I put forward no theory, although I did hint that they were too numerous to admit of such an explanation.

The facts now adduced will, I doubt not, go far to establish in many minds that some intimate sympathy is at work. They may not, indeed, prove of very great value in practice; many will say I have merely traced an interesting physiological fact or nervous sympathy. Yet if they meet with the association as frequently as I have lately done, they will be pleased to anticipate the complication, rather than to be confounded by its occurrence in a more than commonly marked form. The fact that a metastasis takes place from the parotid gland to the breast, the testicle, and even to the brain, may be quoted

[1] 'Medical Times and Gazette,' Sept., 1859.
[2] Ibid., March, 1860.
[3] See Cases in Appendix.

as a reason why men should not turn up their eyes, and yawn, "Impossible!"—or murmur, "Wool-gathering!" —when their attention is directed to a similar occurrence between the tonsils and the ovaries. There is, perhaps, no reason to be assigned why gout should leave the toe and appear in the stomach. No anatomical or physiological relation has been shown to exist, predisposing to such a thing. Still we see the occurrence. Rheumatism flies from the muscular to the fibrous tissues; at least I have heard those say so who good-humouredly laughed at my notion the other day; and one surgeon, too, who stoutly holds there is a close relation between gonorrhœa and rheumatism. It is, however, a matter for observation. If the complication, when looked for, shall prove as common as I suspect it will, I shall be thanked for pointing it out. If I have had a run of unusual cases, why, no harm is done by my giving a few of those cases to the profession.

CHAPTER X.

GLANDS.

THE structure of these bodies has already been described. We have only to consider the parotid; for when this is severely inflamed the other salivary glands are also affected, and inflammation of it is sometimes confounded with sore throat. Parotitis, cynanche parotidea, or mumps, is often epidemic—occasionally it runs through a school, and so seems contagious. It begins as a catarrh; after a few hours the gland swells largely, stiffening the jaw, and disfiguring the face. Swallowing is often for some time impossible, and there may be considerable feverishness. The disease lasts about forty-eight hours, and then subsides gradually, terminating in resolution, as systematic writers say. It furnishes one of the best-marked instances of metastasis. The treatment is confined to not doing too much. Warmth locally, by dry flannels or fomentations, and a diaphoretic or saline aperient, if indicated, are the chief measures.

Suppuration may occur in the cellular tissue around the gland—more especially in scrofulous children. In these cases poultices may be applied, and, if needful, an opening made.

The metastasis is to be treated on general principles, without reference to its origin, except that warmth and

stimulants may be applied to the gland, with a view of inducing a return of the ailment.

Cynanche thyroidea, or bronchocele, is a chronic enlargement of the thyroid body—a disease endemic in some localities, and generally attributed to the character of the water drunk by the inhabitants. Its appearance is well known, and it only needs a passing mention here, since it is sometimes the cause of throat symptoms, as indeed other tumours may be,—a fact which adds greatly to the difficulties of diagnosis, and ought therefore to stimulate us to the most searching investigation.

Any morbid growth in the neighbourhood may set up both laryngeal and pharyngeal symptoms. Dysphagia and dyspnœa may even depend on some such cause lower down, as in stricture of the œsophagus, pressure on or obstruction in the trachea or larger bronchi; or they may merely be due to irritation of the laryngeal nerves, especially the recurrent. Further, the origin of these nerves in the pneumogastric, and their communication with the sympathetic, render them liable to become the seat of irritation reflected from distant organs. Many of these doubts will be solved by the history. This often tells us where the disorder commenced, and sometimes enables us to predict where it will end.

CHAPTER XI.

THE LARYNX AND TRACHEA.

Hoarseness—Aphonia—Laryngitis—Consumption.

The larynx is that part of the respiratory tube in which the voice is formed, and consequently is of much importance. It is suspended by the tongue-bone, between the large vessels of the neck, forming a prominence in front. It is composed of nine cartilages, united by ligaments, two of which form the vocal cords. The thyroid cartilage is the largest, and forms the prominence called the Adam's apple. Below this is the cricoid cartilage, so named from its shape being like a signet-ring, the broad or signet part being behind. The arytenoid cartilages are two pyramidal-like bodies, to which the vocal cords are attached. The epiglottis is somewhat like a leaf in shape, and is placed at the top of the larynx, and attached to the front of it. It exactly fits the opening, and in the act of swallowing shuts down, so as to form a bridge, over which the food passes into the gullet. It may be seen in the erect position by carefully depressing the tongue, and by means of a reflector it is all made visible. The several cartilages are connected together by ligaments.

On looking down the larynx, we see that it gradually contracts to the form of a fissure, running from before backwards, called the glottis. This is formed by four

folds, stretched from the front to the back, called the superior or false, and inferior or true vocal cords, the former being much less than the latter. The narrow opening between the true vocal cords is called the rima glottidis, or true glottis. In the adult male it is nearly an inch in length, and about a third of an inch across; in the female, not more than two thirds of an inch long, and scarcely a quarter of an inch across. In boys it is only half man's size; in girls it is two thirds woman's size. These measurements bear upon the question of passing probangs. At the same time, they are mere averages, and the opening is somewhat dilatable. Below this point the larynx assumes a circular form. Muscles are provided to produce the many motions required, and vessels and nerves are abundantly supplied. It is, of course, impossible here to give a full account of the anatomy of this important part of the body. Works well worth referring to exist in all medical libraries, but no description will serve the purpose of anatomical study. No one wishing to understand the construction of the larynx ought to rest satisfied without dissecting it for himself. He must see and handle to gain a correct idea, and this he may easily do. He will find it instructive to compare this organ with that of the lower orders of animals. A resort to the butcher's shop will enable him to do this with considerable advantage.

The laryngeal mucous membrane has so much to do with our subject that we must notice it further. It is thin, rather pale, and extremely sensitive; over the vocal cords it is most delicate and close fitting, and here its epithelium is squamous,—in the other part ciliated. It is supplied with numerous glands, sq

large as to be seen almost anywhere, except near the vocal cords. On the epiglottis they are most numerous —said to be fifty or more.

The trachea, or windpipe, is the portion of the air-tube between the larynx and the bifurcation into the bronchi, about four inches long, and from three fourths of an inch to an inch in diameter. It is composed of from fifteen to twenty rings of cartilage, connected by membrane, together with muscular, areolar, and elastic tissues. The organ is supplied with vessels and nerves, and lined with mucous membrane, having ciliated epithelium and glands. The rings of the trachea are not perfect. Behind there is a portion wanting, and the space is filled up by the membrane.

Hoarseness.—Its office would lead us to expect that diseases of the upper part of the air-tube would affect the respiration and the voice to a considerable extent, and this we shall find is the case. An alteration in the tone of the voice is often the first deviation noticeable. The simplest and mildest form of inflammation of the laryngeal mucous membrane, such as often occurs from catarrh, at once displays itself in hoarseness or aphonia, so that each of these conditions may be either a symptom or a disease. About the age of puberty, especially in the male sex, when the organ of voice is undergoing such extensive changes, this slight form of inflammation is very common; and at some seasons it seems epidemic, or at least dependent on the weather. It is frequently associated with congestion of the whole fauces. Such cases are to be treated by inhalations and aconite, care being taken to avoid exposure. It is well to forbid the

patient the use of his voice. After this there sometimes remains a relaxed state of the vocal cords for a long time. A hoarseness may go on for many weeks, resisting all efforts to amend it, because it is beyond the reach of them. How can lozenges or gargles affect so chronic a state at such a distance? Inhalations are more reasonable, and iodine is useful, in this form; but, usually, direct topical applications are imperative. A state of this kind may give rise to a tiresome cough and all its evils, including the excitation of dormant phthisis. It is often associated with scrofula or debility; hence, constitutional remedies adapted to the case are almost always to be exhibited, and change of air, where it can be had, is most restorative.

Total loss of voice, originating in this way, requires the same treatment. It is, however, often due to quite other causes. One of the commonest is that peculiar state called hysteria, and this should be discriminated. Sound moral treatment is mostly needed in young girls displaying this temperament, but they seldom get it. Either they are compassionated and humoured to any extent, and thus made worse; or, in an equally improper extreme, they are laughed at, neglected, and threatened for what they cannot help. A girl who is habitually unable to speak may, on some great emergency, recover the use of her voice for a short time. This fact, however, does not prove her an impostor, and to treat her as such may therefore only add cruelty to her calamity. What is more distressing than to see a sensitive young person driven to a state of despondency by the mistaken harshness or unkind surmises of those around her? To teach her and encourage her to make the needful

effort requires considerable tact. That physician will be most successful who, in addition to his medical learning, possesses a clear insight into human nature. Simple prescriptions, accompanied by appropriate mental management, will cure cases over which all the drugs in the pharmacopœia have, alone, no effect.

It is proper to distinguish between true aphonia and an indisposition to speak, resulting in a whisper. The latter may not only be nervous or hysterical, but may arise from a consciousness that to use the voice will cause pain.

Acute laryngitis is always a serious disease, in old age usually fatal. In children it for the most part assumes the exudative form, and the trachea is equally affected, constituting *croup*, which has already been dilated on. It may terminate in the other modes. The most serious is gangrene. Ulceration is very common, especially in cachectic constitutions, or in the specific forms. Effusion, for the most part, constitutes *œdema glottidis*. Suppose then a healthy adult thus attacked, we must consider from the outset that there is imminent danger, and must direct all our efforts to avert it. Like all the phlegmasiæ, it begins with rigors, followed by inflammatory fever. The organ attacked explains the other prominent symptoms, which suggest the diagnosis. There is pain, and that is increased by pressure. The voice is greatly altered, as is also the respiration. Harshness is the characteristic of both. The voice is either very hoarse or entirely suppressed,—the patient only speaking in a whisper, and even then finding his breath catches him with every few syllables. The inspiration is long and loud, as if there were some ob-

struction to the entrance of the air. As in all laryngeal affections, there are very marked exacerbations and remissions, dependent on the spasm always set up. In bad cases, the remissions grow less frequent, the exacerbations more severe, and at last every inspiration seems convulsive. The lividity and duskiness common to all forms of impeded respiration are strongly marked. Cough is but slight, as the patient cannot fill his lungs. It will appear from this description that the diagnosis in typical cases is pretty easy. As we enter the chamber, the stridulous breath is detected; and as we look towards the bed, and see the unhappy sufferer propped up by pillows, gasping for every breath,—the larynx moving up and down, the very shoulders heaving convulsively at every gasp,—hawking up with evident pain the tenaceous phlegm, with mouth open, and saliva dribbling from his dread to swallow it, eyes staring and watery, lips livid, nostrils dilated, and face either pale or dusky, but evidently one of intense dread, the picture is impressive; and when we take hold of his hand and feel its pungent heat, or with finger on the pulse note its indications of fever, the case seems almost unmistakeable; and then—as the sufferer points to his throat, and in a hoarse, unearthy whisper, says "it is all here,"—we feel so sure, that we think we need not trouble him by auscultation. And yet some further investigation must be made; for the above symptoms are, to a considerable degree, merely indicative of an obstruction to respiration, the nature of which it is our business to determine. Moreover, the picture may be somewhat varied in laryngitis itself. The extreme restlessness and fear of suffocation may have given place to the doze of exhaustion,

from which, however, the patient soon wakes in dreadful agitation—a state somewhat similar to that seen in some heart diseases. Or, delirium or coma may have supervened, whereby many symptoms will be masked. The physician may well, therefore, pause. Perhaps, by waiting, he will observe a remission, of which he can take advantage to push his inquiry. In the mean time the history of the attack will have corroborated or rendered doubtful his first impressions. It is needful to decide on the presence or absence of disease within the chest. From purely spasmodic affections, the fever, and the pain increased by pressure, will distinguish it. On looking into the throat we do not see sufficient cause for so much suffering; the fauces are only congested—except in cases arising from the spread of inflammation to the larynx, in the exanthemata, which will not be liable to confuse, if the history be properly ascertained. If the tongue be pressed down with gentle firmness, the epiglottis may be seen, very red and swollen; and where the distress occasioned by the reflector is not too great, the laryngoscope will bring to view a similar condition of the whole larynx. Generally, a hasty glance at the under surface of the epiglottis and the opening of the tube is all that can be got. We should also be prepared for the occurrence of traumatic laryngitis, from inhaling irritating gases or liquids, or from swallowing corrosive poisons. The latter generally leave marks of their passage over the membrane of the mouth and fauces.

Having made out the cause of so much suffering, the question for the physician is how to relieve it. The first wish is to arrest the inflammation, and everything likely to do this is to be put in force, since a very little

effusion in this position is of the greatest consequence. At one time, the above hint would have been sufficient to draw forth all the most potent remedies to a very considerable extent. The practice of medicine has, however, undergone a great revolution. Bleeding is now but seldom resorted to, and most rarely is venesection repeated on the same individual. Perhaps in these cases it is more common than others, since the abstraction of blood eases the circulation, and therefore moderates some of the most urgent symptoms. Whether it really does arrest the progress of inflammation is still a moot point, and one on which it is not our duty here to enter. When every deduction is made for difference, in age, sex, constitution, or other peculiarities, there still remains a considerable disagreement in the practice of able men, and there is great authority quoted on both sides. With respect to leeches, less difference exists. A practitioner must judge for himself, in each case, whether his patient can bear bleeding from a vein; and will no doubt be to some extent biassed by previous experience as to its value. If he bleed, let it be early enough. It may be here observed, that as a mere depressant it has only one advantage over others—the rapidity with which a considerable effect is produced. Yet we are not without depressants, the effect of which is both quick and certain. The use of mercury is common, both to prevent effusion and to cause absorption. Much has been said against this drug, and its virtue denied. It must be acknowledged, that the evils of salivation, conducted with care, are not for a moment to be weighed against the danger of laryngitis; and this remark is applicable to other diseases. Much contradiction and angry dispute would be saved by an honest balance of chances.

It is not our business to be supremely wise, but to heal disease; and without any reference whatever to theories of the action of remedies, much benefit has been derived by the afflicted from empirical practice. It is the author's belief, that the evidence of successful practice, by high authorities for a long period, is too great to be easily overturned; that there are diseases from which a chance of relief is cheaply purchased by all the ill that can accrue from the most heroic practice, provided, of course, it be as skilfully conducted as by the great men who have passed from us, but whose deeds remain to this day; and that we are not justified in neglecting any means of saving lives intrusted to our care. He would indeed require strong reasons for a resort to strong remedies, but he is equally indisposed to forswear anything which has ever proved useful.

On this subject it is but right to allude to the variation which all diseases seem to undergo by time. Once it seemed as if all indisposition assumed a sthenic form; at present the asthenic type seems to prevail. This change of type in disease is not admitted by some physicians; but a very careful comparison constrains me to believe that adynamic cases are more common than formerly, and so to give a partial assent to the theory. Then there is a great contrast between disease in large cities and healthy country places. In the latter the sthenic type is now met with, while in the former asthenia seems universal. Among sturdy northern villagers I have seen a form of fever exactly corresponding to the synocha of Cullen, and can affirm that those patients who were bled recovered more rapidly, and in larger proportion, than those who were not.

We must confess, however, that all treatment of

laryngitis has hitherto been little encouraging. I venture to suggest, that one cause of this may have been too great reliance on antiphlogistics. Bleeding, leeches, counter-irritants, mercury, antimony, purgatives, every depressant in turn,—these are the remedies which have been, and still are, insisted on in our schools as giving the only chance. The practitioner must *do something*, and this one idea of combating the inflammation has, I believe, absorbed too much of his care. I therefore solicit a larger degree of attention to other points—*minor* or secondary, call them if you will, only give them their proper share. How then about soothing remedies? Could not inhalations of steam, impregnated with anodynes, often be employed? Opium in this form has great effect; and a still more certain calmative, and one quite justifiable, if only given with every precaution and in a suitable way, is chloroform. It may be next to impossible to use an ordinary inhaler for the various anodynes at our disposal, and such a method would not be a proper one of giving chloroform in such a case, on account of the gasping for breath; but a few drops on a small sponge, say on a probang, held near the mouth, will calm the spasm, and may even do more. Ice, again, held in the mouth, is a powerful sedative. What shall we say, too, of warm baths and vapour baths? Further, is not the method of keeping the patient in a heated atmosphere, dry or moist, as mentioned in our chapter on croup, well worth a trial? The sufferer must be made to rest his voice. Sometimes there is a frequent effort to speak encouraged in the worst stages; and when improvement begins, the intentions of the physician are all frustrated by his allowing talking, or his directions in this respect being disobeyed.

When, in spite of all our efforts, suffocation is impending, we have still a last resort in an artificial opening into the respiratory tube. It is not to be left till all hope is gone, but done as soon as other means fail, and the dyspnœa is getting worse. The opening ought to be made large enough to serve the purpose well. Too often it is made much too small to allow of free respiration for any length of time.

Here it is proper to pause for a moment, to take note of a spurious laryngitis, commonly called œdema glottidis. It is quite true that it is the œdema which is the urgent point in the true inflammation, and equally certain it is that effusion about the vocal cords does occur without any acute inflammation. It is most common in erysipelatous affections of the throat, and in some diseases of the kidney. The symptoms are not so severe, except the sense of suffocation, and there is no pyrexia. Œdema of any part of the throat may occur, but here it is that it acquires vast importance. The absence of signs of disease in the chest bears both on diagnosis and treatment.

It may also be worth while to mention, that hysteria has been mistaken for laryngitis. Generally, in hysterical simulations the uneasy sensations are referable more to the gullet. Close attention will show that the breath is really unimpeded. The proof of obstruction to the entrance of air is not complete. It evidently enters to a very much larger extent. There is, consequently, no lividity of the face or lips, which must occur where the obstacle is considerable; *unless faintness co-exist*, and the pulse is the tell-tale of this condition. In hysteria the pulse is good, in spite of the loud tracheal breath. Moreover, the epiglottis is not in-

flamed. Resistance to inspection may rouse suspicion; for a patient really gasping for breath, with an inflamed larynx, will not voluntarily close the mouth,—cannot, in fact, draw air enough through the nose. The voice, too, is not hoarse, though it may be reduced to a whisper by the will. A full dose of opium produces tranquil breathing, and so cures. Chloroform would effect the same object in a much shorter time.

Chronic laryngitis may succeed the acute form, or commence itself. The symptoms are similar, but milder. When coming on gradually, the diagnosis may be difficult, but the prominent guides will generally be found. The disease is progressive; the voice is impaired, and gradually lost, or nearly so; there is a husky cough, scanty mucous expectoration, and dyspnœa of a paroxysmal nature. Some pain and tenderness, too, will point out the seat of inflammation. The laryngoscope will clear up many a difficulty, and the stethoscope is not to be laid aside. The history is very important. Tumours pressing on the trachea or larynx, or irritating the laryngeal nerves, may excite symptoms of chronic laryngitis. The most common form is aortic aneurism. An attempt to refer the symptoms to their causes is the best way of arriving at correct diagnosis in all cases. It leads us to inquire for any absent. Thus in aneurism, a careful practitioner will have a suspicion roused by some incidental effect; such as a feeling as if the food stuck in the throat a little way down,—the character of the voice,—the pulse; coupled with the absence of soreness. Auscultation and percussion must be called in to decide.

The management of chronic laryngitis partakes of

the same variations as does its nature from that of the acute form. All measures are milder; the disease often yields to a proper constitutional treatment, but topical applications, inhalations, and fumigations are mostly indispensable. These must partake both of an anodyne and alterative character.

Some of the consequences of the disease are very serious. The cartilages may be implicated, they may die and exfoliate, leaving the patient the only chance of an opening and artificial removal of the decayed portion. Such cases require the utmost vigilance on the part of the attendant, and will sadly try his patience, yet they may occasionally reward him with success in almost hopeless circumstances. Ulceration of the membrane, or of the follicles, is much more common. We then see the sputa mixed with blood and pus. Topical and general treatment are both needed.

CONSUMPTION OF THE THROAT.

There is a form of ulceration of the larynx which demands further notice. Laryngeal phthisis, throat consumption, or tubercular sore throat, is in effect the same disease in the throat as consumption in the lungs. It is most common as an addition to pulmonary phthisis, occurring in one fourth of the whole number. Sometimes, however, the deposit of tubercles commences in the larynx. The symptoms of this formidable disease are those of ulceration, associated with the general indications of phthisis. Chronic laryngitis, in a person hereditarily predisposed to consumption, is a very suspicious ailment. The chest should be diligently

explored, as the presence of disease in the lungs would, of course, render the prognosis far more gloomy. The great hope of these cases is that when confined to the larynx, they are within the reach of topical applications. Cod-liver oil and other remedies are at the same time to be used.

Before quitting the larynx, a few words may be said on the ulceration of the follicles of the epiglottis. The ulcers are large, indolent, and troublesome. By the laryngoscope they may be certainly detected. By nitrate of silver, combined with appropriate constitutional treatment, they may frequently be cured. Neglected, they are liable to set up other ailments.

Polypi and other tumours of the larynx have hitherto been obscure diseases, but their study now promises to make great progress. Their symptoms are those of laryngeal obstruction, and are necessarily progressive, until at length tracheotomy becomes imperative. Laryngoscopy affords the only certain means of diagnosis, and in a magnifying reflector very small polypi may occasionally be seen.

CHAPTER XII.

THE EXANTHEMATA AND SORE THROAT.

The whole of the mucous membrane is liable to be affected in the eruptive fevers. The gastric as well as pulmonary portion is often seriously implicated. Chronic diarrhœa, from ulceration in the bowels, and phthisis and chronic bronchitis are among the sequelæ of this class of diseases. In measles and scarlet fever is most manifest the complete upset to the system. The patient droops and declines after either in much the same way. The physiognomy is somewhat diagnostic between the two. The most important eruptive fever is scarlatina, but the others deserve mention. For the most part, the eruption seems to extend from the skin. The affection of the mucous membrane usually commences with an erythematous congestion, and then proceeds to put on the distinctive form.

In *smallpox* a regular eruption of pustules may take place along the whole gastro-pulmonary tract, aggravating the suffering and the danger. The larynx and trachea suffer in this way to a considerable extent. The throat symptoms (difficulty of swallowing, increase in the flow of saliva, hoarseness, &c.) come on about the sixth day. Inspection then shows the inflammation. Varioloid eruptions, as well as true smallpox, may be complicated with sore throat.

In *measles*, we observe inflammation of the respiratory

mucous membrane from the very commencement. The alimentary lining is also very generally in an irritable state, and this often passes into severe disease. The peculiar character of the ailment is not more distinctly marked in mild cases, being only a state of inflamed sore throat; but in severer cases it puts on a more definite appearance. The fauces become dusky and livid, and that in distinct patches, which on careful investigation are observed to present appearances similar to the cutaneous rash. From this liability of mucous membrane to suffer, we see in every bad epidemic what are called the complications of measles, tonsillitis, pharyngitis, laryngitis, tracheitis, bronchitis, parotitis; indeed, inflammation in any part terminating in all its forms, from resolution to gangrene.

In *erysipelas* there is a tendency for the affection of the mucous membrane to terminate in effusion of serum. A collection of this kind often takes place beneath the membrane of the pharynx, especially in weakly persons.

Miliaria.—In miliary fever I have not so completely traced the eruption to the mucous membrane; but the increase of fever, with serious gastro-enteric or chest symptoms which constantly occur, evidently point in that direction.

Scarlatina is by far the most important disease of this class in relation to sore throat. The connection between the two has only been established in modern times, and therefore we find the elder writers speak of the eruption as part of malignant sore throat, putrid sore throat, ulcerous sore throat, &c. The identity of these affections with scarlet fever being now admitted, we shall not enter into the arguments. Suffice it to say, however, that, in our pride of modern progress, we are too apt

to neglect such men as Fothergill and Huxham, who, although unable to trace the connections of diseases as we have, did undoubtedly hand down to us most accurate descriptions of the epidemics they witnessed, and whose works now remain, and will well repay attentive study.

Very great variations are observed in the course of the complaint. We see in one case the skin disease most manifest; in others, that of the mucous membrane. Occasionally the throat is the only sufferer. Again, we find measles and scarlatina exhibit a tendency to run into each other; and consequently a number of cases are grouped together which are in some points very dissimilar. The relations between these two eruptive fevers being very intimate, systematic writers have been put to no small trouble to lay down their differential diagnosis. It is highly improper to call every sore throat attended with fever scarlatina. In this disease, after rigors and pyrexia, the patient usually complains of sore throat, but not invariably; and the soreness is seldom in proportion to the mischief. There is hoarseness or some variation of voice; hawking, and an unpleasant sensation, or pain in swallowing. The whole of the throat is of a vivid rose red, hot and tender. The tongue partakes somewhat of this state, partially disguised by the fur of the fever, through which the enlarged papillæ project, giving it the appearance of strawberries. Now and then the throat, though much affected, gives no pain; and the patient will declare, on your wishing to inspect it, that there is nothing the matter with it. The tonsils suffer to a very great extent; frequently the disease seems to be a malignant tonsillitis. The Eustachian tubes and nares

are both involved; purulent discharges coming from both nose and ears, and permanent deafness sometimes resulting. The salivary glands are enlarged and tender, and suppuration often takes place in the cellular tissue around them. The cervical glands may be similarly affected. Ashy specks soon occupy the throat, become brown, and ulcerate. These, as well as collections of mucus, are to be distinguished from true exudation, which is but rarely seen. Ulceration is not so common as some have stated. Gangrene is the most serious form the sore throat can assume. Of course, the symptoms vary according to the position in which the fearful changes are hurrying on. It is plain from what has preceded that scarlatina may exhibit all the appearances of sore throat, and all its varieties, from a very mild up to a most fatal one; so that the physician has in this complaint an extensive and interesting field for observation and comparison.

The differences in the eruptions are just as great, scarcely incommoding one patient, and soon destroying another by the fever alone. It is believed that, in some cases, the fever kills before there is time for a rash to appear; in others, none exists. Probably, many cases have a slight rash which is not observed; and I have found it by searching, when friends were very positive no such thing could be seen.

The CONSEQUENCES of the exanthemata are those of blood disease: secondary hæmorrhages occur; even purulent deposits sometimes form; the blood after death is semi-coagulated. The whole mucous membrane shows the effect of the disorganization. The heart, kidneys, and other viscera, are softened. Otitis is very serious, both as to its immediate and more remote effects. Coryza of the

most distressing kind, scarcely arrested by injecting the nostrils with powerful lotions, is only second to more fatal complications. Hæmorrhage from the mouth or nose, indeed, from any part of the membrane, or some other lesion of this tissue, may speedily terminate life. The disease may spread to the larynx and trachea. Congestion of the brain or lungs may appear. Mortification of the lips may take place. The fever-poison, circulating in the blood, seems to arrest the whole vital powers and disintegrate the living tissues; at least, in malignant scarlatina, some death-agency seems to penetrate every part of the system. Even in later stages, the danger is not over. Convalescence is long before it is really established, and this is as true in the mild as in the malignant form. Hypertrophy of the tonsils generally remains. Anasarca, or some other species of dropsy, often seizes a patient who flattered himself he was well. The health is always so shaken, that the convalescent is susceptible of very morbific influences. Diseases following this or any of the exanthemata will consequently put on a more adynamic form, and require some modification of their treatment.

The DIAGNOSIS of the exanthemata is so beset with difficulty, that I am tempted to communicate an observation I have made respecting their physiognomy. This, I believe, often affords considerable aid in coming to a conclusion; indeed I have, on more than one occasion, predicted that the peculiar drooping would end in an eruptive fever, and the event has justified the prophecy, as some of my medical friends can testify. It is easier to point out at the bedside than to describe such a sign. The countenance looks heavy, dull, less intellectual than usual, especially in lively children. Seen

from a distance, an idea of œdema or puffiness is conveyed. Strumous patients display this most distinctly. In measles, this physiognomy is associated with and partially obscured by coryza or lachrymation; in scarlatina it is simple and characteristic.

In respect to treatment, the indications are as various as the appearances. No class of complaints exhibit better the necessity of keeping in mind general principles. The local affection, important as it is, and requiring so often topical applications, ought not to engross the whole attention. The numerous complications need to be vigilantly watched for and appropriately met from the first, since in nearly every one the treatment is to be modified by its occurring during the fever, and according to the epidemic prevailing, or the prominent peculiarities. It is proper to urge in this place the importance of a mild, equable temperature, a light, moderate diet, cooling drinks, clean apartments—disinfected by the due admixture of fresh air, as well as by chemical agents—and the more strictly medical means of keeping in check both the fever and the local affection. Aconite is invaluable for both these purposes. Tepid and cold sponging may both be useful to abate the heat of skin. Inunction with suet has been tried for the same purpose, and with success,[1] but it is not a popular remedy with Englishmen. Ice and cold liquids in the mouth may be tried for the early cynanche. Let the physician also keep in view the naturally depressing nature of the disease, and not carry antiphlogistics too far. Scarification of the tonsils is often very effective in reducing the local inflammation, while it does not pro-

[1] 'Journal für Kinderkrankheiten,' 1848.

duce the effect of venesection—is even less powerful than leeches. Gargles,—to clear the throat of mucus, or to remove smell,—cordials, tonics, and stimulants, are all in turn required. Painting and sponging with medicated liquids must be employed. Gentle saline aperients cannot be dispensed with. Long after the danger seems past, the utmost care is to be taken to avoid exposure and restore the health. Further details are purposely avoided, to impress more effectually the lesson that every case is to be carefully weighed in all its bearings, its salient points made out, its prominent features distinguished, and its complications duly considered. It is the duty of the physician not to prescribe for the disease, but for the patient. He should hold firmly, as his grand principle,—regarding it as his guiding star in all difficulties,—that no disease is to be treated according to its place in a nosological arrangement. He will then require no special rules for special emergencies. Routine practice in the eruptive fevers will ever show a fearful death-rate; but scientific prescribing will prove them far more tractable, lessening both the mortality and the period of convalescence, by distinguishing the entity from the complications, and administering to the necessities of individuals as they present themselves.

Other diseases which illustrate the connection between skin and mucous membrane do not require detailed notices. Enough must have been said to excite attention.

CHAPTER XIII.

SPECIFIC SORE THROAT.

This general designation might include the exanthematous form, as dependant on a blood-poison; and perhaps the same might be said of diphtheria. This is mentioned to show another strong relation between diseases. Then the tubercular and cancerous varieties are thus allied, widely as they differ. The division of diseases into common and specific is not, however, otherwise desirable.

Here we shall treat only of syphilis, which may run a slow or rapid course, and may attack any part; and which is introduced here mostly in a diagnostic way, being liable to cause error. The history is often difficult to ascertain, and he who can best extract it from his patient, with least annoyance, will gain the most confidence. Venereal sore throat may occur as a mere diffuse congestion on the fauces. Generally some excoriation will follow, and a superficial ulceration will be shortly established. The tonsils come in for a large share of suffering. The ulceration will enlarge and deepen; it is unhealthy looking; the voice is injured. The constitution may not sympathise much, yet the disease progresses. On the other hand, a very smart fever may be set up at the early period, and this may mislead. More com-

monly, chronicity is the chief mark of the virus, and cachexia the state of the patient. In other cases considerable sloughing takes place, with pain and fever. All round the slough is dark and livid, and life may be suddenly closed by the opening of a vessel. Again, in the nose and palate, it is apt to extend to the periosteum, when all the horrors of exfoliation occur. This has been attributed to the use of mercury, but it does occur when this mineral has not been used. Nevertheless, mercury may set up such disease of itself, and it is easy to believe that it may aggravate it when otherwise induced. When it spreads to or attacks the larynx, all the symptoms and consequences of laryngitis are seen. It is often needful to open the windpipe.

The treatment will be twofold; that proper to the lesion of the throat, and that directed to the constitutional state. To combine these is occasionally difficult, but patient perseverance will succeed. No one should be satisfied with lessening a local manifestation, and leaving a virulent poison to fester in the system. Unless it be eradicated, it will surely reappear with redoubled obstinacy. To discuss here the great questions which arise in reference to the management is not our intention. Medical literature already abounds with books on the subject. We are now awake to the evil of indiscriminate routine practice. Happily, less quackery than formerly exists in the profession, although there is more out of it. Specific treatment, it is true, has become the order of the day with impostors and druggists, and hundreds are still undergoing the penalties they might escape,—but they have only themselves to blame. The laws of society carry their power with them. If men contract a noxious disease by infringing them,—

they are foolish; if they then suffer ignorant charlatans to aggravate their misery, sap the foundations of their strength, and convert manageable into most intractable diseases,—they are still more foolish. But as it is impossible to prevent, we can only lament either folly.

CHAPTER XIV.

CANCER OF THE THROAT.

This disease usually commences in the pharynx, and from thence may extend all around it. Very rarely it seems to begin in other parts, but even then the pharynx will scarcely ever escape. It is, happily, not a very common manifestation of the cancerous diathesis. The symptoms at first are most obscure, perhaps merely uneasy sensations—induced by deglutition, or aggravated by that act. Sooner or later the symptoms of pharyngitis come on gradually, and constantly get worse. Prickings or numbness are added to the soreness; and after a while the peculiar lancinating pains, which so often excite our apprehensions in other parts, give more distinct intimation of the awful nature of what has perhaps before been regarded as a trivial ailment. The impediment to swallowing gets more distinct, is ascertained possibly to depend on a tumour, or at least a thickening. When ulceration commences, the fearful pains and horrible discharge, with the great cachexia, prepare us to witness the fulfilment of our fears. Emaciation is necessarily rapid, and the physiognomy of the disease is usually well marked. In the early stage we often detect nothing, though by great care we may make out thickening or hardening from the deposit of the morbid matter. Scirrhus and epithelioma are much more com-

mon than cephaloma. The ulcers, when formed, have the usual unequal, fungous look, and thick, hard edges.

Our utmost sympathy is demanded for the sufferer. If we can hold out no hope of cure, we may nevertheless to some extent mitigate his misery, and smooth over the roughness of so sad a death-pillow. Besides, it is not clear that cancer may not be checked at an early period; and if it may, have we not a hope held out of some day meeting it as successfully as we do some other constitutional states? Let us then, while ever discountenancing the cruel mockeries of the cancer-curing tribe, lose no opportunity of increasing our knowledge of the dread malady. Further, let not our neglect of its victims drive them into the open arms of wretches who make any promise for the sake of enriching themselves. Perhaps this is a weak point with many. We are easily deterred from wearisome work of so sad a kind; it is a relief indeed to be spared the heart-rending watching and care required; and feeling the little we can do, we gladly escape witnessing pains which unnerve and unman us. But the call of duty rings louder and louder in our ears. Impostors multiply, made of sterner stuff than many of us can boast. Let us then, for the sake of humanity, so devote ourselves to our patients as to convince them that no one thing revealed by our art is neglected in their case, and lead them to turn a deaf ear to those who flourish by our honest opinion having too often paralysed our efforts. The effects of iron, arsenic, iodine, and other powerful alteratives will not be enlarged on here. Again and again, in the course of these pages, have constitutional measures been insisted on. The reader's library will

furnish him with the observations of the ablest men; and he will scarcely fail to put in practice the most approved methods. He will, however, be exclaiming that in the first stage alone can he do good, and then almost only when he is scarcely sure of the case. Suppose this were true—his palliatives for later stages are by no means to be omitted. He should ring the changes on all the anodynes, and do everything to make the poor sufferer more comfortable. He is to pay the same regard to diet as at first, but later more direct support is needed. Topical measures will occupy much attention. Disinfectants *must* be used, not only for the apartment, but as local applications to the cancer. These may be combined with anodynes or anæsthetics, only bearing in mind that, much as we want to banish the noisome smell, we must never stimulate to increased action. Cold water or ice is often both grateful and useful. As in all other heart-rending scenes, we must not aggravate suffering by a foolish indulgence of feelings, but by doing everything that can be done, and by equable mental states, inspire the sufferer with fortitude and resignation. Yea, in favoured times, we may even call up cheerful smiles, and give solid content in some of the most discouraging circumstances.

CHAPTER XV.

NERVOUS SORE THROAT.

HITHERTO we have been, for the most part, considering organic lesions of the throat which leave manifest marks of their injuries. We have yet to fill up our view by a brief reference to those affections in which we can, as yet, discover no change of tissue. Further inquiry will, doubtless, diminish their number, and the laryngoscope will prove a valuable means of investigation. We hope to be able, by its aid, to discover lesions which, without it, we can only suspect.

Hysteria has been already described as simulating laryngitis, and we must also be prepared to witness other equally strange vagaries in this peculiar state.

Spasm, again, is a condition to which our attention is directed, not only from its excessive liability to complicate all laryngeal diseases, but because an analysis of its causes often leads us so near to nervous irritation.

Neuralgia is a term well understood as affecting some parts, and we have only to remember its possibility in any situation, to be prepared to meet with it occasionally affecting the throat.

Aphonia and dysphonia may each be a symptom of several throat diseases already described, or either may of itself constitute the only deviation from health.

They are both most common from a relaxed state of the vocal cords, the result of some degree of inflammation; but they occur pretty often as expressions of a peculiar state of the nervous system.

Of course, in every one of these cases it is our duty to make sure that all the means of investigation at our disposal fail to detect other disease, before we assign it to this category. Other traces of disturbed nerves will not often be wanting; indeed, they are so common as too frequently to suggest this diagnosis, when more careful examination points out other causes.

CLERGYMAN'S SORE THROAT is a name which has been too much abused. We prefer to restrict it to a condition we call purely nervous, because we fail to trace any other disease. Its name arises from its being so common in clergymen and other public speakers. We cannot suppose it is caused by mere use of the voice. Exercise of any organ invariably gives it increased development; witness the familiar instance of the athlete's muscular system. The very brain itself, by regular work, gains rather than loses power. But the work of the clergyman is anything but regular. Many of them exhaust the whole physical frame by exertion of the vocal organs on the Sabbath, and then play the part of mutes during the week. Their life is generally sedentary, and the worst kind of sedentary; for they very commonly indulge in close rooms and every enervating luxury. "Early to bed, and early to rise," is a practice few of them try; the old student habit is strong upon them, and late hours are mostly kept. Called upon to exert the voice when it is thus out of practice, they try to supply its deficiencies by extra exertion, which fatigues

them to a considerable extent. It is impossible thus to inure any organ to intermittent labour. Moderate exercise, gradually increased, is as beneficial to the voice as to the limbs; and those who aim at public speaking ought to "go into training" for the work, as much as athletes do. Those with weak voices might in this way improve them to a surprising extent.

This view will explain how men who have gradually increased their work outlive and out-talk all the prophecies of their "preaching themselves to death." Very often, rather than wear out the voice, they improve it, as long as robust health continues; and not seldom it long survives the declension of general physical and mental power.

The author firmly believes that numerous cases of failing voice in *clergymen, public singers, lecturers,* and others, originate in the manner above described.

Probably, there is present an obscure chronic inflammation, or some of its consequences. A degree of relaxation is the most common condition, but this is difficult to determine. Symptoms vary largely: one case gives every indication of ulceration; in another, hoarseness, an uneasy sensation, a dread to speak aloud, or even aphonia, will be present, alone or in combination; in a third, an incessant desire to clear up is the sole inconvenience.

The management of each case must depend on the opinion formed of it. The adviser may feel somewhat embarrassed, but we may here suggest that, in all nervous affections, hygienic measures are of the most importance. The physician will do well to lay down a strict diet and regimen, and insist on their being adhered to. Every invigorating measure is to be put in force

in proper season. Very often, a considerable period of complete repose will be enjoined prior to the exercise which may be afterwards necessary, and during this rest the chylopoietic viscera may be attended to. Not infrequently brisk cathartics or saline aperients will be indicated. Afterwards will come the more tonic measures, both regiminal and medicinal; and last of all the pure neurotics. Alteratives will probably be required in some stage. No measure should be adopted without due attention to the patient's constitution; and here we repeat what has before been insisted on, that all the tonics will disappoint, if the system be unfit to receive them. Many a prescription, excellent in its way, only fails through neglect of this caution.

I have no encomiums to pass on any of the much-abused tonic or alterative drugs, nor have I any others to propose in their place. Each is in turn in fashion, and I have succeeded with all. I attribute the success for the most part to attention to the above rule; for the indiscriminate use of either, though frequently serviceable, will by many failures bring it into disrepute. This remark applies not only to general treatment, but also to the topical measures which are sometimes needed.

APPENDIX.

Case I.

Inflamed Sore Throat during an Epidemic of Scarlatina, cured by Aconite.

A healthy lad, of thirteen years, was attacked on Monday with sore throat and general drooping. I saw him on the Wednesday following, when the whole fauces were of a vivid-red colour, and the tonsils large and tender. The skin was hot and dry; he was very thirsty; his urine scanty and high coloured. There was sleeplessness, and some little dry cough. Tongue and physiognomy looked suspicious, and he had been exposed to the contagion of scarlatina. Half a drop of the Tinct. Aconiti every four hours. This was continued for five days, though at the latter period it was less frequently repeated. He was then discharged cured, having had no rash or further symptoms.

Case II.

Inflamed Sore Throat, cured by Aconite.

A woman of slender frame, thirty-one years of age, presented herself on Monday at the Metropolitan Dispensary complaining of a sore throat. She had previously been under my care for dyspepsia. The fauces

were intensely congested; deglutition was very painful; there was constant hawking and slight cough, with smart pyrexia. One drop of tincture of aconite, in one ounce of water, every four hours. The following Thursday she was greatly improved. Skin no longer hot and dry. Pulse had lost its hardness, and was diminished in frequency. The soreness in the throat was nearly gone, and the congestion had disappeared. Continue the medicine two or three times a day. After three days she was discharged cured.

Case III.

Inflamed Sore Throat, cured by Aconite, which produced its peculiar sensations.

A professional gentleman, after exposure to cold and wet, was seized with shivering, followed by pyrexia and sore throat. On the second day his throat was very painful, fiery red, and considerably swollen. His voice was reduced to little above a whisper. Tenderness on pressing the thyroid cartilage. Hot and dry skin, thirst, scanty and highly coloured urine. Pulse 100, full. Ten grains of sugar, with two drops of aconite tincture, to be dissolved in the mouth every three hours. Eight doses have been taken. He now complains bitterly of tingling all over him. It began in the fingers and toes, and extended to the trunk. It is a feeling "similar to the taste of the powders in the throat." The congestion is entirely gone. The voice much better, but still there is hoarseness. Pulse 80, small, compressible. Omit the medicine. The next day he considered himself cured.

Case IV.

Inflamed Sore Throat, cured by Aconite; power of the drug.

A young man of twenty, in good health, caught a cold. After rigor, he had intense soreness of the throat. Pressure was painful. Great hoarseness. Injection and swelling of the fauces. Pulse 95, full and hard. Skin hot and dry, with thirst. Three drops of aconite tincture, mixed with sugar, placed on the tongue and slowly swallowed. Numbness of the throat soon supervened, and a sensation of tingling lasted four hours. At the end of this time the pulse had lost its fulness, become soft, and only numbered 75. The intense injection had given way, and the velum had lost much of its contractility, the uvula lying on the tongue and provoking a constant desire to swallow, and occasionally a suffocating cough. It regained its tone by the next day, and all signs of the sore throat were gone, as well as the effects of the medicine.

Case V.

Inflamed Sore Throat, with Bronchitis.

Mrs. F. B—, a lady of robust health, but now somewhat debilitated by nursing, having ventured to church one wet Sunday morning, felt while there several "cold shiverings," and in the afternoon complained of headache, nausea, parched lips, and thirst. During the night she could not sleep, and her throat felt dry and uncomfortable. On Monday she had some cough, which pained her under the left clavicle. In the evening of

this day I found her with considerable pyrexia, hoarseness, and sore throat, the soreness extending to the apex of the left lung. In this spot moist râles were very distinct. The whole of the fauces looked intensely red and swollen. The epiglottis and lining of the larynx partook of these characters, as demonstrated by the laryngoscope. I ordered her simple inhalations, and an anodyne diaphoretic at bedtime, to be followed by a saline aperient in the morning. The affection did not spread further, but passed quickly through its stages, presenting all the characters of an inflamed sore throat, accompanied by a localized bronchitis.

The case is introduced as an example of inflammation of mucous membrane not observing the boundaries which our nosology draws, and interesting in a diagnostic point. It proves the occasional occurrence of bronchitis confined to one apex, and such an affection, if chronic, might give rise to considerable mistakes. More than once I have seen even the acute form, of which this case is an example, supervening in a weak state, set down as consumption.

Case VI.

Inflamed Sore Throat, with Bronchitis.

A young man, of consumptive tendencies, twenty-five years of age, caught a severe sore throat. On the third day from getting wet he was seen, and found rather feverish and depressed, with much hoarseness. The fauces were much congested, the larynx and trachea both painful and tender, and a slight cough, with tenacious expectoration, much increased the pain and the soreness. In the reflector, the epiglottis and superior portion

of the larynx were seen to be fiery red. The patient could not bear a more complete laryngoscopic exploration. Over the bronchi the respiration was rather harsh, but quite dry. He took two or three doses of aconite, and inhaled steam with much benefit. The voice became natural, the pain on pressing the larynx and on coughing, as well as the congestion of the fauces and larynx, disappeared. But cough and expectoration, with feverishness, remained. Two days from the former auscultation moist râles were established over the upper lobes of both lungs. The bronchitis passed through its course as usual, and the young man soon got about again.

Case VII.

Exanthematous Sore Throat, with Ulceration, cured by Aconite.

Joseph H—, a lively lad, seven years old, was taken ill on the 5th of October. I saw him on the 8th, and found him with a very hot and dry skin, strawberry tongue, and the exanthematous physiognomy well marked. No rash had been observed. He denied that his throat was sore, but on inspection I found the whole fauces intensely red and swollen; one tonsil especially was large, dark, livid-red, and tender. The pulse full and frequent. One drop of tincture of aconite, in syrup and water, to be taken every four hours. Two days later an ulcer had formed on the tonsil; it was deep, and the edges looked angry. The treatment was persevered in, as the constitutional symptoms were just the same. At the end of a week the ulcer had healed, the inflamed state of the tonsils and fauces had disappeared, only the least possible enlargement being

visible. All feverishness was gone, his appetite was restored, and he was picking up again. He gradually returned to his play, having taken no medicine except the aconite.

Case VIII.

Sore Throat partaking of both the Exanthematous, and Aphthous Form.

Thomas J—, aged three years, was under my care for bronchitis, from which he was scarcely recovered when his brother was seized with scarlatina. Being thus exposed to the contagion, this cachectic little fellow was attacked with a sore throat, which at first resembled his brother's, but there was a much lower kind of fever with it. On the seventh day from the seizure I was consulted, the mother having till then persevered with some linctus she had for his cough, —deeming this only a little fresh cold. The physiognomy and tongue were characteristic, each tonsil had an ulcer on it, and there was another on the soft palate. Five grains of chlorate of potash, three times a day. The next day an ulcer appeared on the internal surface of the cheeks, and on the next a number of smaller ones were seen on the gums and edge of the tongue. Those on the tonsils had spread in width and depth. Deglutition was very painful. To have beef-tea and arrowroot alternately every four hours, as well as a dose of chlorate of potash at similar intervals. Ten grains of powdered rhubarb at bedtime, when required. This plan was persevered in for ten days, when improvement was manifest. At one time the great difficulty was to get the child to take any nourishment.

Now some desire for food was evinced, and henceforth he steadily improved. In another week no trace of the severe local ailment remained.

This little boy was subsequently attacked with œdema of the face and albuminous urine, but he rapidly recovered from this, and eventually got quite strong.

Case IX.

Tonsillitis in a Child.

William R—, aged seven months. The mother is uneasy at a slight dry cough, which has prevented sleep for two nights, and at the very hot and dry skin of her little babe. It has had no coryza or sneezings. There is some pyrexia; the respiratory murmur is everywhere normal. The throat is intensely red and somewhat swollen. The whole mouth is unusually hot; one tonsil is especially large.

℞. Vini Ipecac., ʒj;
Sp. Ætheris Nitr., ʒiss;
Liq. Ammon. Acet., ʒiij;
Syr. Papav., ʒiiss;
Aq., ℥j. M.
Fiat mist., cujus capiat ʒj 3tiâ quâque horâ.

An abscess formed on the larger tonsil, discharged a small quantity of matter, and soon healed. Some enlargement remained, which yielded to alterative tonics.

Case X.

Exanthematous Sore Throat, cured by Aconite.

George M—, æt. 15 months, a strong-looking child, but not weaned, was admitted to the Metropolitan Dis-

pensary on the first of the month. Had never ailed till two days ago, when he became fretful, hot, and thirsty. He is now almost insensible; his skin very pungent; his eyes suffused; and his pulse 140. The physiognomy led me to examine the throat, which was very red and swollen. The tonsils were so large as nearly to meet in the centre of the isthmus, which was thereby diminished almost to obliteration. The tongue was of the kind called "strawberry." No rash had been noticed, and no cough.

He was ordered the following mixture:

℞. Tinct. Aconiti, ℥ij;
Syrupi, ʒij;
Aquæ, ʒx. M.
Sumat ʒj, 2dâ quâque horâ.

This was steadily persevered in for three days, at the end of which there was very great improvement,—the skin being moist, and the pulse reduced to 108. The medicine was then taken less frequently. He progressed well, and in another week was discharged cured.

Case XI.

Another case of Exanthematous Sore Throat, cured by Aconite.

Samuel B—, æt. 7, had been ailing for a week, when he was admitted to the Metropolitan Dispensary. His physiognomy at once directed my attention to the probability of scarlatina. On close inquiry, he was admitted to have had a "little red rash" for a day or two. His skin is now hot and dry; he is very thirsty; his pulse 150; he has been delirious during the last

two nights. The tongue is of the strawberry appearance; the fauces are swollen and livid. On each tonsil are three or four deep ulcers, covered with a dark-brown secretion, easily removed.

℞. Tinct. Aconiti, ℥viij;
Syrupi, ʒss;
Aquæ, ʒiiiss. M.
One tablespoonful every three hours.

After he had taken half a dozen doses, his skin lost its heat and became bedewed with a gentle perspiration; the tongue and fauces presented a less formidable appearance; the pulse had fallen to 95; he was less thirsty, and asked for a little food, after partaking of which he fell into a comfortable sleep. The medicine was given at much longer intervals, and he continued to improve. After four days the throat-symptoms had nearly disappeared, and a medical friend who examined him considered he only laboured under great weakness. He returned to generous diet, and took a dessert-spoonful of the following mixture twice a day:

℞. Ferri et Quinæ Citratis, ʒss;
Syrupi Aurantii, ʒiij;
Aquæ ad ʒiij. M.

Case XII.

Ulcerated Sore Throat.

John P—, æt. 30, placed himself under my care in November, 1856. Describes himself as teazed with the throat for the last three years, during which he has been under several practitioners. Some pronounced him consumptive, but the majority attributed his sufferings to the venereal virus. On this ground he has

been profusely salivated three times. He is just recovering from the last mercurialization. His teeth are all loose, his breath very offensive; he has lost twenty-eight pounds in weight during the last three weeks, and now presents the appearance of confirmed cachexia. Declares he has had no primary affection for the last five years. His throat-complaint came on gradually, and has never been benefited by any treatment. He has used a variety of gargles at different times. The voice is rather thick, with a slight nasal twang. There is scarcely any pain on pressure over the larynx or trachea. He has not a true cough, but a constant desire to clear up, which process brings away a quantity of thick offensive phlegm. Swallowing produces a very unpleasant sensation, and occasionally pain. After eating he has a feeling as if crumbs stuck in his throat, and this is not got rid of without abundant expectoration. Auscultation and percussion fail to detect thoracic disease. The digestive powers are much impaired. The fauces are pale; the veins are seen coursing over the velum, large and sinuous. The uvula is very irritable, which prevents a thorough examination of the throat. By firmly pressing down the tongue with my speculum, a somewhat livid portion of the mucous membrane was brought into view. He was ordered to live on milk diet, take fifteen grains of rhubarb and ten of magnesia every night; to rinse his mouth, and gargle frequently with the following wash:

℞. Potass. Chlor., ʒij;
Aquæ, ℥viij. M.

In a week he had improved; he was getting the better of his last salivation; he enjoyed his food more than he

had done for a long time; the throat was less irritable. A warm reflector was placed in the back of the mouth, and light directed upon it. This brought into view two or three large, deep, foul ulcers, situated low down in the pharynx, and surrounded by a livid-coloured portion of the membrane. Behind the velum a smaller ulcer was detected, and another at the root of the tongue. The epiglottis partook of the livid colour, and was covered with a dirty mucus. This description represents the information acquired by four separate explorations at intervals of a day or two, during which he only took nitro-muriatic acid in a bitter infusion, and continued the wash. The under surface of the epiglottis was just caught sight of, and the edges of the opening of the larynx indistinctly seen surrounding a dark cavity. I did not expect at this time ever to be able to discern the vocal cords.

A sponge probang was saturated with a solution of nitrate of silver (twenty grains to the ounce), and applied freely to the diseased membrane. In four days this was repeated, with a solution of thirty grains to the ounce. Two more applications of the latter strength were made at similar intervals, and cured all but the two largest ulcerations, which were low down in the pharynx. His throat was now accustomed to the contact of instruments, which made it much easier to manipulate. By bending a caustic holder at two or three angles, I was enabled to pass a piece of solid nitrate of silver down to the obstinate ulcers. It was of course impossible to confine the application strictly to the ulcerated surfaces; but as these were situated near together, its action was not so extensive as might be imagined. This operation was performed four times in

three weeks. Rest to the pharynx was insisted on as far as practicable. He took three meals daily, composed of soft unirritating food, and cold water was slowly swallowed after each. All his local complaints had now disappeared, and the reflector brought nothing but healthy membrane to light.

His recovery from the effects of mercury was slow, but he had no return whatever of any throat-symptom.

Case XIII.

Consumption implicating the Throat.

Joseph K—, æt. 50, a dark, spare man, came under my care on the 26th September. Above a year ago he caught a cold, from which he believes he has never recovered. Six months ago he became hoarse, and was evidently wasting, but he continued his employment in the city. For the last three months he has felt weak, and always flushes after dinner. His cough is troublesome, and he expectorates a good deal of "yellow glue." The hoarseness came on gradually. He could sometimes speak well, at others not. For the last five months he has seldom spoken except in a whisper. Deglutition painful. Pressure over larynx discovers great tenderness. Percussion could not show appreciable difference between the two apices. Some dulness conjectured over both. Moist râles and bronchophony existed at left apex. Bronchophony only at the right. The breathing all over was harsh, in several places almost tubular.

Local applications of nitrate of silver twice a week, and opiates every night, constituted the chief treatment

for exactly a month, at the end of which time a somewhat sudden death released him from his sufferings. A good deal of relief was obtained by using the following anodyne inhalation, two or three times a day:

℞. Tinct. Conii, ʒv;
Tinct. Opii, ʒij;
Æther. Chlor., ʒj. M.

A teaspoonful to be put in the inhaler with half a pint of hot water.

October 25th.—He had been relieved during the last fortnight. He got up this morning and dressed without help, which he had not done for many days. But his wife thought he appeared "more strange than he had been for weeks," and consequently watched him closely. His cough was much better. At one o'clock he took some soup, after which his wife left him for about a quarter of an hour. On her return she was surprised to find he had moved his chair halfway across the room, and was sitting quite still in it. She asked him how he did it, but he did not answer. She noticed that "his mouth was drawn on one side," and he seemed unconscious. Help was called; they laid him on the bed, and he died in a few minutes, without speaking a word.

Sectio cadaveris.—Forty-eight hours after death. Tubercles scattered throughout both lungs, and collected here and there into considerable masses. The apices were most affected. In the middle of the left were several small cavities, filled with matter. The pleura of the left upper lobe adherent. Heart healthy. The trachea was healthy. The mucous membrane of the larynx was pale, and for the most part smooth, but in several portions tubercular elevations existed. There were erosions of both true and false vocal cords. The

posterior half of the true cords seemed hard, yellow, ligamentous tissue, uncovered by membrane. The arytenoid cartilages were completely ossified, and the right was quite denuded of mucous membrane. No signs of acute inflammation anywhere. No œdema of the glottis—in fact, the aperture was larger than usual, from the relaxed state of the parts which existed. The epiglottis was small, apparently atrophied, its under surface covered with minute ulcerations, and its upper portion with scars and hard elevations. Permission could not be obtained to carry the investigation further.

Case XIV.

Throat Consumption, with healthy Lungs.

I did not see this man during life, and could only obtain an imperfect history from the medical attendant. He was considered to be clearly a victim to pulmonary consumption; the throat had not even been inspected, though it was admitted he had long been hoarse. He was stated to have gradually wasted away, with a very severe cough and expectoration—often of an offensive kind, and on several occasions mixed with blood. He was hereditarily predisposed to phthisis, and thirty-five years of age. His chief medicine was cod-liver oil. He continued his usual avocation to the last week of his life.

On a post-mortem examination, no disease of the thoracic viscera was discovered. The larynx was extensively affected; the sacculus laryngis presenting one mass of ulceration; the arytenoid cartilages being ossified, one of them necrosed. The epiglottis had lost its cartilaginous nature, and looked like a puckered piece of

mucous membrane. Both its faces were covered with foul ulcerations.

The above sad specimen of fallacious diagnosis suggests painful reflections. A skilful auscultator would have pronounced the lungs healthy; but they were concluded to be the seat of the disease, without a stethoscope being once applied to the chest. It is quite probable the poor patient might have been restored to perfect health, had his disorder been certainly determined, and appropriately treated from the first. Nothing is more reckless than to give up a man as "in the last stage of consumption," without carefully determining the actual state of the lungs.

Case XV.

Case of Tonsillitis, accompanied with Ovarian Irritation.

M. H—, æt. 20, a chlorotic-looking girl, applied for relief at the City Dispensary. Two years ago, she had small-pox, since which she has always been ailing, though before then she had enjoyed excellent health. The catamenia first appeared at fourteen, and were quite regular until eighteen—the date of the attack of variola. On her recovery from this, they remained absent, but a vicarious discharge of a sanguinolent nature took place every month from the stomach. This lasted ten months, when the catamenia reappeared, but were very scanty, and attended with intense suffering. Last month they again disappeared. She complains of headache and general lassitude. Three days ago, sore throat came on, with pyrexia, preceded by rigor. To-day there is, in addition, very great pain and tenderness in the right

groin. The pain is of a peculiarly sickening character, and on any accidental pressure, extends through to the back, and down the thigh. The skin is hot and dry; there is thirst; the tongue is covered with a dirty brownish fur, through which the papillæ come out; the bowels are confined; the pulse 90, and weak. The fauces are deep red; the right tonsil very greatly enlarged and tender. Swallowing and speaking both very painful. A saline aperient was ordered to be taken at once, a diaphoretic anodyne at bedtime, and another aperient draught the next morning. Fomentations to be used freely. These medicines gave great relief. The bowels were well operated upon. She passed a tranquil night, and the menses appeared in small quantity the following day. At the end of a week, the right tonsil was no larger than the left, and the right ovarian region no more tender than the other. She remained under treatment for three weeks more, when she considered herself better than she had been since having the small-pox. The treatment was, during this time, for the most part tonic, at the same time paying considerable attention to the chylopoietic functions.

Case XVI.

Tonsillitis and Ovarian Irritation.

Marian S—, a married woman, thirty-one years old, mother of four children, had been under my care for some time for dysmenorrhœa succeeded by menorrhagia. There was considerable ovarian irritation. The tonsils during this time were watched, and believed to gradually enlarge.

June 4th.—She had rigor, succeeded by pyrexia and

acute tonsillitis. This was treated by scarification and a saline aperient, and terminated in resolution. But from this time, the tendency to sore throat was more marked, and some pain and swelling occurred at every menstrual period. At the sixth period, there was pain and tenderness, with hoarseness, terminating in loss of voice, accompanied by feverishness. The tonsils were worse than usual, and interfered much with the employment of the laryngoscope; as far as could be seen, however, was congested. A drop of tincture of aconite, in water, was ordered three or four times a day. At the end of a week, she was in her usual health. The tonsils remained hypertrophied. They were thought to diminish under occasional scarifications; but after a while she expressed a wish to have some more decided measures adopted, as her health had greatly improved. The larger tonsil of the two was sliced down to the normal size; from which operation she considers she experienced great comfort. The remaining tonsil diminished in size, and her health improved under the following mixture:

℞. Syr. Ferri Iodidi;
Liq. Sarsæ;
Liq. Taraxaci, aa., ℥j. M.
Sumat ℥j, ter die ex aquâ.

Case XVII.

Ovarian Dysmenorrhœa.—Cynanche Tonsillaris.

N. T—, a stout young woman, æt. 24, single, had been some time under treatment for dysmenorrhœa, accompanied with a nearly constant pain, of a sickly character, in both ovarian regions. Every month the exacerbation

of pain was most marked, and extreme tenderness on pressure was experienced. She now complained of a periodical sore throat, which left in the intervals an uneasy sensation on swallowing. The tonsils were found considerably enlarged, and were twice observed to be more swollen and tender at the catamenial period. The treatment was entirely directed to the constitution. The case was rather obstinate; but at length all the functions were normally performed, her strength was greatly increased, and only a slight enlargement of one tonsil remained.

Case XVIII.

Enlarged Tonsils; Excision.

A girl, æt. 13, with hereditary tendency to struma, of rapid growth, being both tall and stout for her age, had had a difficulty of swallowing for a year or two, as well as an occasional tickling cough, with hawking of tenacious mucus. There was also shortness of breath, and she had been pronounced consumptive. Her aspect was that of an overgrown but immature young woman, teazed by some impediment to inspiration. I at once directed my inquiries to the throat, which was declared to be quite well; but on inspection, the tonsils were seen enormously hypertrophied. The uvula lying between them was in contact with each. The vesicular murmur was quite healthy in character, but rather feeble. I advised immediate excision, which was performed, with relief to all her symptoms. She soon picked up her strength, and rapidly passed on to perfect womanhood.

Case XIX.

Ovarian Dysmenorrhœa.—Tonsillitis.

A young woman, æt. 24, possessed of a good constitution, placed herself under my care for most obstinate and distressing dysmenorrhœa, of twelve months' standing. With every period there was agonising pain in the left ovarian region. This pain was increased by pressure—so much so that she was obliged to lie on the opposite side, with her leg drawn a little up, so as to relax the abdominal muscles; it was of a nauseating kind, and sometimes provoked vomiting. Leeches and counter-irritants had been applied by her former advisers. In the intervals the pain and tenderness were never entirely absent. The bowels were mostly constipated, and their action usually aggravated the pain.

On my asking her if she had ever had sore throat, she stated that during the last year she had experienced several attacks, some of which coincided with the dysmenorrhœal paroxysm. Lately, there had been a constant feeling as if something was in her throat, which she ought to swallow, and sometimes it seemed to get in the way of the food. On inspection, the left tonsil was very greatly enlarged, stretching beyond the middle of the faucial passage. It was hard, but not tender. The treatment was, for the most part, constitutional. For the first fortnight it was entirely directed towards securing a better action of the chylopoietic system. In the paroxysm—only one of which I had occasion to prescribe for, so rapidly did she improve—aconite gave considerable relief. As soon as the digestive organs

acted efficiently, tonics and chalybeates were given with advantage. The tonsil was well scarified on three or four occasions. It diminished in proportion to the other symptoms.

Case XX.

Tonsillitis, with Ovarian Irritation.

F. A—, an amiable young lady, twenty-four years of age, of leuco-phlegmatic temperament, and somewhat anæmic appearance, after getting her feet wet, was seized one Sunday with shiverings, followed by feverishness and sore throat.

Monday morning.—Pain and difficulty of swallowing are marked, but the respiration is easy. She complains of headache, anorexia, nausea, furred tongue, constipation; there is thirst, pulse small, 100; she has wandering pains about the hypogastrium. Catamenia ought to have appeared three or four days ago. They were established at seventeen, and have returned regularly till the present time. The whole of the fauces are congested; the left tonsil is hot, hard, tender, and nearly twice the size of the right. She was ordered a mustard pediluvium, and to remain in bed. The inflamed tonsil was freely scarified.

On account of the pain caused by the act of swallowing, powders only were prescribed.

℞. Hydrarg. Chloridi, gr. iij;
Jalapinæ, gr. ij. M.
Fiat pulvis, statim sum.

℞. Potassæ Nitr.;
Sacch. Alb. aa., ʒss. M.
Divide in pulv. vj, cujus sumat j 2dâ quâque horâ.

Tuesday.—The tonsil is not so tense, but very sore. No appetite, less thirst and heat of skin. Tongue cleaner. Bowels open twice by the medicine. Pulse 105. The hypogastric pains have settled down into the left ovarian region, where exquisite tenderness exists in conjunction with some intumescence. The movement of the bowels greatly aggravated the pain. The patient lies perfectly still in bed, on her right side, with the left leg slightly flexed, and is in dread of the least movement. Her countenance is expressive of constant pain.

R. Tinct. Aconiti, ℥vj;
Sacch. Alb., ʒj. M. sec. art.
Divide in pulv. vj. Cape j 2dâ quâque horâ.

Wednesday.—Much improved. Looks more cheerful. Pain in throat much better. Has taken a little chicken broth for the first time. Bowels open once. Slept several hours, and woke in a gentle perspiration. Hypogastric pain less nauseating in character, and less intense. Still she chooses the same position in bed, and dare not move much. Pulse softer, 95. Continue the powders.

Evening.—Still the same, but feels a tingling all over. "It began in the toes, and spread upwards; it is just like the taste of the powders in the throat, when they have been taken about five minutes." Pulse 90. Take only one powder during the night, unless very wakeful.

Thursday.—Slept well for two hours, then took the powder, and afterwards slept for four hours. Very little soreness of throat. Swelling of tonsil much diminished. Tongue clean. No thirst. Skin moist. Bowels open once this morning. Tenderness over ovary still marked,

and any accidental sudden movement makes her cry out. Pulse 88, soft, compressible. Sensation produced by the aconite unabated.

Friday.—Catamenia appeared. Remained during Saturday and Sunday, on which day she got up for a little while. From this time she steadily recovered, the treatment being almost entirely dietetic and regiminal.

Case XXI.

Aphonia.

A young lady, of nervous temperament and rapid growth, fifteen years of age, had been under several eminent physicians and surgeons for upwards of a twelvemonth, but had obtained no benefit. She states that the beginning of her ailment was a sore throat, with a little hoarseness. Her voice became gradually weaker after this, and at length was reduced to a whisper. She has had no cough or dyspnœa all along. There is no tenderness over the larynx; circulation and respiration are both normal; bowels open once daily, and the catamenial period has been regularly observed since it first appeared eighteen months ago. There is nothing to be observed in the fauces, unless a slight degree of pallor, and the laryngoscope brings no new fact to light.

The prescriptions of previous attendants were subjected to a careful scrutiny. They all consisted exclusively of general tonics. The several preparations of steel and bark were not departed from. Malt liquor and wine was advised by all, as well as generous diet. No one had prescribed a single alterative drug. I

therefore laid aside the malt liquor, the wine, and the tonics, for a fortnight, during which time I placed her on a very mild alterative plan. Her appetite had now improved, and she wanted to be allowed some beer again, which before she never cared about. The voice was now laryngeal, but of the very lowest tone. She returned to her former regimen and to the tonic medicines, and gradually improved in strength and regained her voice.

Case XXII.

Exudative Sore Throat.

J. D—, a vigorous boy, of three months old, caught a cold. At an early period it was noticed that the tone of the cry had greatly changed, and this was followed by paroxysms of a "loud, cracked cough." For three or four days he was under the care of the family surgeon, who merely gave saline expectorants. His state, when I was called in, was alarming. The loud stridor of inspiration, the ringing, croupal cough, the intense fever, the pungent heat of the surface, the flushed lividity of face, the full and frequent pulse, and then a sudden convulsive exacerbation of the dyspnœa, told in almost unmistakable terms the nature of the case, and called for some decisive measures. The mother's statement was very clear. He had been better and worse by fits and starts; but, on the whole, was decidedly retrograding. Once, at the close of a paroxysm of coughing, he brought up some flakes like wafers, and this seemed to give him relief. Percussion clear all over the chest. Vesicular murmur feeble.

Respiration irregular. Sibilus over bronchi, and moist crepitus mingled with the noisy inspiration over the trachea. A speck of exudation detected on the epiglottis.

Emetics, of equal parts of antimonial and ipecacuanha wines, were advised at each severe paroxysm, and small doses of calomel in the intervals. The room to be kept at a uniform, high temperature. The next day the fever seemed less intense, the pulse was softer and less frequent, the skin moist, and no new symptoms had arisen. The emetic had been taken four times in thirty hours. Salt to be substituted for the antimony and ipecacuanha. This treatment was persevered in for four days, when I was again requested to see the child. The pulse had become feeble, the skin moist; the countenance was livid, the voice reduced to the faintest whisper. At each inspiration the chest heaved hurriedly and irregularly, as if oppressed by some weight, which a strong effort, aided by the abdominal muscles, every now and then lifted up. The child lies half comatose in its mother's lap, has had no nourishment for two days, nor has the last dose of salt caused vomiting. Dulness on percussion, with bronchophony at one base, at the other crepitation. Tincture of iodine to be painted over these parts. Beef-tea, sherry, and the following mixture, to be given alternately by teaspoonfuls:

℞. Ammon. Sesquicarb., gr. xij;
Ætheris Chlorici, ℥vj;
Syrupi, ʒss;
Dec. Senegæ concent., ʒj. M.

Under this treatment the urgent symptoms gradually gave way, but the child was left in an extremely debili-

tated and emaciated state, so that we almost despaired of its life, and had to place it on a course of cod-liver oil. The voice remained very weak for several months.

Case XXIII.

Nervous Sore Throat.

A clergyman of distinction had been so harassed by a dry cough, uneasy sensations in the throat, and painful hawking, as to be obliged to give up his vocation. The complaint had come on gradually, and all the time his general health was deteriorating. During the last two years he had thus suffered he had been unable to preach without previously taking a glass of warm port wine, sweetened with black-currant jelly. He had for some time exerted himself to his utmost power twice a week, going through the whole services and preaching on Sundays, lecturing to large audiences, addressing school-children, &c., while on other days he kept to his study, by a good fire, with a view of taking care of himself. The membrane of the fauces was rather pallid, and the veins large; uvula not elongated. Laryngoscopy revealed no lesion. Some dyspeptic ailments were first prescribed for. He was then placed on a tonic plan. Rest to the vocal organs was insisted on; his fears of taking cold and increasing his disorder were disregarded, and he was ordered out-door exercise daily, wet or fine, as well as cold sponging every morning. The strictest regard to diet, and some tonic medicines were

further enjoined. After following this course for two months he began to feel his voice, and returned to its use gradually and regularly. He was soon able to resume his clerical duties, and now adheres to a proper regimen.

Case XXIV.

Nervous Sore Throat.

A public singer presented just such symptoms as the clergyman in Case xxiii. He had been ordered various gargles by different practitioners, but had obtained no benefit from any; in spite of all, he continued to grow worse. His mind was very desponding, as he seemed to have little prospect before him of continuing his profession, on which he was entirely dependent. His physical power was far below *par*, his pulse feeble, his digestion very imperfect. He could not sing a solo without first taking a stimulant. No information was afforded by the laryngoscope. I explained my view of his case, and he promised to implicitly follow my instructions for a month as soon as his present engagements were accomplished, which extended over twelve days. During these he was to be strict in his diet, and to take some mild alteratives to restore his digestion. So successful were these remedies, that he was able to commence the tonics when he began his month's rest of the voice. Exercise, cold sponging, and every means of

invigorating his system, were persevered in with complete success. He began at the end of his month to sing a little at home, daily, and after a while was able to appear before an audience, as he considered, with a stronger voice than ever.